

Planetary Democracy

AN INTRODUCTION TO
SCIENTIFIC HUMANISM
AND
APPLIED SEMANTICS

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and
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INTRODUCTION

I

A small group of scientific humanists are attempting to give form to an emerging philosophy which they feel expresses the faith and action of our future society, now so near the birthing. It seeks out those whom Lin Mousheng calls "comrades-in-ideas."

This group feels that scientific humanism comes close to the Chinese way of practical idealism, and as we are coming to realize, the practical idealism of the Chinese has given depth and continuity to their thought, and has produced a race at once courageous and adaptable. The end result of Chinese philosophy is a courage and tenacity based not on fanaticism such as we see in Nazi Germany, but upon the love of life and faith in the ultimate goodness of life. The epic of the universal bravery, ingenuity, and adaptability of the Chinese people, catapulted through centuries of history in a few brief years of modernization and war, will be one of the great living dramas when "it can be told." So it would seem to be the part of wisdom to balance our former preoccupation with recent German philosophy, which has brought the country of its origin to rigidity, fanaticism, and shame, with an open-minded and open-hearted approach to the wisdom of the East, particularly of China, in search of qualities which

guarantee the humanity of man, individual courage, individual initiative, individual adaptability, and individual discrimination. As we accustom ourselves to a new world of semantic insight, we will draw freely upon the wells of wisdom in Chinese thought for ethical enlightenment and political realism.

In a preface to Lin Mousheng's *Men and Ideas*,¹ Pearl Buck puts the situation in these words:

I know that philosophy is a word to frighten many people in the west, and I think we have a right to be afraid. The sole touch with philosophy that most of us have had was in college when with nothing but bewilderment we were enmeshed in the winding coils of European philosophical thinking. Abstraction piled upon abstraction was the chief impression left upon us. For if the west did not follow exclusively the Japanese military-ruler pattern of complete suppression of thought, nevertheless the Western peoples have segregated the philosopher, at least from their ordinary living. They have not had time for these coils, these twistings and turnings of the soul, these examinations into the primary being of men and matter. Life was too short a span between the first gaze of the opening eye and the last closing. I cannot tell where the fault was, or who did the segregating, whether the practical people in impatience pushed aside the dreaming philosophers and gave them no honor, or that, being without honor, they retreated still further into dreams, or whether the philosophers themselves made the first retreat before the hard facts of life.

But in China the philosophers were not allowed to retreat. Some of them tried it, being there as everywhere, proud and sensitive men, but the people would not have it. They believed that these thinkers had the secrets of life, and they forced them to reveal what they knew. The Chinese were really far more practical than we were; they said in

¹ The John Day Company, Inc., 1943.

effect to their philosophers, "If there is anything in what you are thinking, then put it to some use for us—go and tell our emperor how he ought to govern us, and tell the landlord how to change his evil ways, and tell us, too, what we ought to be."

In short they demanded of their thinkers practical values. These were essentially moral values, but the Chinese wisely believe that moral values pay a good deal more than their price in direct returns of peace and prosperity. Good will among men is valuable not as a religious asset but as an excellent atmosphere for trade. A good man as emperor, they reasoned, was the best surety for good government, and good citizens insured good business. Tyranny in the palace and crime on the streets simply made life a nuisance for all concerned. For above all else the Chinese love life, its pleasures and pastimes, its work and play. Virtue, they reason, made for the abundant life, not in heaven, but on earth. "Therefore," they told their philosophers, "teach us all, high and low, what is the superior man, not for some future state, but here and now."

With such demands upon them, it was impossible for the Chinese philosophers to retreat into abstraction. The people held them grimly to earth and made them think to the point of their practical need. The result is a great body of the finest political-philosophical-ethical thinking in the world. It was political thinking, too, for political thinking is essentially philosophy in practical terms of the people's life.

This we feel expresses the strategy of the Battle of Man. political thinking that is "philosophy" in the practical terms of the people's lives.

A new theory of education is basic to scientific humanism. An educational system based upon it will first teach individuals *how* to think—not *what* to think—and where to look for the thoughts and ideas of other people, contemporary as well as traditional, at home and abroad.

Such an approach will provide (1) a code of values by which to judge thoughts and ideas; (2) a sense of responsibility for social participation, and (3) a way of life that ensures the courage and initiative to put convictions into action. Men of the future must be discriminating, participating individuals.

With education, said Confucius, there are no classes. Democracy presupposes such education. We have hitherto been inclined to think of democracy in terms of a political system of franchise, or some type of economics, or ideals in social welfare; but these are things which should emerge out of an education for democracy. For us, democracy is an outgrowth of humanistic education. Specializations are dependent upon—they should not dominate—the general theory of education; specialists are the “experts” a democratic society requires to carry out its collective, enlightened will. The experts do not rule, they serve, in a rightly-ordered society. Democratic society must see to it that experts, whether military or economic, do not misuse the power temporarily entrusted to them by the nature of their services. The chief qualities of experts in any department of social administration are not only their “expertnesses,” but their moral integrity as well.

II

Doubtless all our readers are familiar with the dramatic story of Paul’s speech on Mars Hill, where he interpreted to the ancient Greeks (in Christian ideology, to be sure) the meaning of their statue to the “Unknown God.” But long before the beginnings of the Christian

era, Stonehenge stood as a circular symbol of a much earlier form of cosmic worship. The philosophical humanist, meditating on these evidences of man's deep impulses of awe and worship, wonders whether a renaissance of reverence might not find its modern expression in the globalized Stonehenge of a literally As-Yet-Unknown God—in very truth embodying God's plan for man because it is mankind's plan for the godlike in humanity. In less circuitous language, what we are suggesting is that for scientific humanism the “unknown god” yet to be revealed is essentially man's capacity for striving effort to surpass himself in that upward swinging spiral of planetary history which at long last culminates in human progress, in the fulfillment and integration of individuals, and in the creation of a peaceful, evolutionary society. Evolution of individual or society depends upon insight and inspiration; God is always Unknown, for when he becomes known he becomes Man.

Such a view, to be developed at length in the following chapters, is something more than an “organismic theory of society”, it treats the entire earth as an organism swimming in space and living in time

Logically our presentation of this conception may be broken up into two phases, one concerned with the philosophical basis for the earth-organism theory, and the other with the building of the political and economic structure of the new society. At the present time, there seem to be two types of planning going on in the world, each independently and each marching to its own type of synthesis: the one, ideological planning (subjective), is working toward a psychological-ethical unification within men; and the other, objective planning, is being

accomplished through the fabrication of social mechanisms such as the framework of the United Nations embodies. The goal of scientific humanism, it may be said, is to bring these two types of planning together, and scientific humanism can never rest until a comprehensive social organ has been created which fuses these two convergent trends of human effort.

This sets the general plan of our presentation. The subjective phase of global planning, whereby a planetary civilization is to be brought into being, is dealt with in Part One (in the main). This, as we have suggested, is a matter of developing an "ideology" for mankind. The objective side of global planning is considered in Part Two (for the most part). This latter is a problem of integrating the links of the chain of world humanism into a federation of friendly peoples so that the "potentials" of humanism, irradiated by each person, may return from their trips around the world to reinforce those individuals who have already contributed their quotas to the emerging social continuum of mankind.

A fundamental theme running through both parts of the present volume is the thesis that we must rise above our old habits of thought and formulate some new ways of thinking, if we are to deal adequately with the unprecedented situation confronting us. We must teach people to think in global terms, or planetarily. We must formulate a new set of global concepts: planetary ideas about trade, ethical responsibilities, money, tariff, debts, raw materials, techniques for doing things, and so on. As John W. Studebaker, United States Commissioner for Education, puts it, we live in a world of air-age geopolitics. The interrelatedness of peoples in an age of

airplanes and radio and television creates a condition in which there will be either a mental enslavement of man by the private manipulation of power, or the facilities of air-age geopolitics will be used by free people everywhere to build a democratic world order on a planetary scale.

As the present formulation of scientific humanism conceives it, the main problem of education is that of clarifying our ideas of democracy through a semantic analysis of the verbal system symbolizing the processes and relationships of society. But we do not stop with the descriptions of facts of existing social structures. Our problem as educators and moralists, who are using language as an instrument for the creation of new structures, is so to change our evaluations (understanding, sizing up) of the present territories (structures) to which we have been applying these terms (maps) as to facilitate the movement of society in the direction of an ideal-territory-to-be-realized.

Verbal structures, however, constitute but one variety of map Geography is another field in which maps are used. In connection with new possibilities in this field, global semantics gives hearty approval to the suggestion of Professor W. R. McConnell that the new geography must teach us to think of globes and maps in terms of military strategy, international diplomacy, war production, geopolitics, and, we would like to add, peace-time planning.

From the title of the present book, no less than from what has already been said, it is evident that we are vitally concerned with the discipline known as semantics. Semantics is a method, comparable to scientific method,

by the use of which one may arrive at a result, and that result we sometimes describe as a "political-economic-ideological synthesis." In brief, scientific humanism is the end-product of the use of applied semantics. Semantics is not a panacea; it is a tool useful in social rebuilding.

In the field of education, global semantics (i.e., map reading supplemented by philosophical interpretation) has now an unusual opportunity. For example, oceans and straits and other bodies of water must be thought of in the future as *connecting* rather than *separating* places. We must, as Professor McConnell observes (in an article referred to in Chapter VIII), think of climate not so much as inches of rainfall and degrees of temperature, but rather in terms of crop production and human energy. Airplanes and radio have so changed our relationships that geography must measure distances in hours rather than in miles. Thus is global thinking being forced upon us. Like it or not, planal thinking and political isolationism are both on the way out—and for the same reason: because "the world is one."

In the formulation of some of our ideas about scientific humanism and applied semantics, we have made use of suggestions from various sources. Needless to say, the authors would not have had the temerity to undertake the writing of the present book without the stimulus of considerable encouragement from others, and this comes in no small measure from those who are no longer satisfied with existing approaches to present world problems. There have been many tributary streams flowing into the pool of thought from which this small measure has been drawn. Let us call it a group effort. Among those who have given assistance in the preparation of this volume

is Lloyd Morain, to whom thanks is due. The Creative Age Press is also to be thanked for permission to reprint (with modifications) the chapter on "Education for Global Mindedness," which first appeared in the magazine *Tomorrow*.

The authors would welcome comment and correspondence from "comrades-in-ideas."

O. L. R.

B. D.

PART I
SCIENTIFIC HUMANISM

Dedicated

to

Ethel S. Dummer

CHAPTER I

WHAT IS MAN?

I

Why must man have a peaceful world in which to live?
Why must man be free to seek truth, goodness, and beauty?

Why must man have a religion of the As-Yet-Unknown?
Why must man have an education for global-mindedness?
Why must man love his neighbor as himself?
Why must man evolve a global society?

If we had clear answers to these questions we would have an answer to the mystery What is Man? That mystery has been the driving power of man's self-evolution through the ages. Minerals, trees, and sub-human animals do not ask that question. The means to ask the question, and to give answer to it, are what distinguish man from all other things in nature. Man is conscious of a continuity of purpose; he feels that he has a function and a destiny. To understand himself is the chief end of man.

What is man?

That is the mystery of life, the mystery of the planet, the mystery of the universe. By every means at his command—curiosity, faith, imagination, reasoning, and experiment—man has tried throughout his history to answer the question.

What is man?

Man has learned a great deal about the structure of man, how he acts, how he thinks, what he wants, about his place in the natural world, his relationships to his fellows and to his environment, a great deal about man's potentialities, his fears, his hopes, his skills, his aspirations.

But the question still remains. What is man?

What am I?

Man's unfolding answers to that question, man's changing conception of himself, have always been the seed-ideas of his religions and his philosophies. As man's concept of man changed, man's religion has changed. Today man's concept of man is undergoing a major change, and out of the new concept will emerge the archetypal idea that will shape our new culture.

II

In the midst of formulating these queries and trying to give answer to them, the problem came to us in flesh and blood. We had been turning over an abstract idea, shifting it about as a child does a burning glass, trying to make fire. But here was a man newly home from Europe, limping, bearing the scars of Dieppe on his young body, and some bits of colored ribbons on his breast. This lad had come out of the west, where, before 1939, he played first violin in a high school orchestra. The greatest adventure of his pre-war life was a trip to California to play in an international high school festival of music. Then he went off to war. He trained three years and

fought for part of one day. In an instant of time, a splinter from a German bomb cancelled out the results of those long, monotonous years of military conditioning. He landed on the beach of Dieppe full of natural human fear, but his training served him well. He drove a carrier, and his three best friends manned its guns. "I don't remember half I did that day. I just went ahead and did what I was trained to do. I had only an inch wide slit of glass to see through, but what I saw was so awful that sometimes I closed the slit and drove blind."

A few hours later he was aboard ship, crippled for life. But he had saved the life of an officer "by great heroism outside the line of duty," and won a decoration, he had seen his three friends killed by a bomb that landed inside the carrier.

He'll be discharged soon. He faces civilian life without a root or a tie anywhere, his only possession a violin. He has a love of music that overshadows everything else. He has one dream—if only some day he can play in an orchestra under Stokowski, he'll ask no more. The color flushes up into his face when he says these things, and his hands tremble, for his wounds were not only physical ones, but spiritual ones as well. He was wounded by the monotony, by the unnaturalness of his life "within his line of duty," and by the horror of a few hours in a city that he knew only from a relief map. But because he has a dream, a hope, a passion, his wounds will heal, and he can—given his due as a human being in a society of enlightened men and women—live to be richly employed by his times and satisfactorily skilled and happy.

"We'll need music after the war, won't we?" he asks.
Will we? What is man?

What is there in a man, even so very young and inexperienced a man, that can induce him to accept a kind of life that is abhorrent to him, in order to carry out an abstract idea of duty? What is it forces the human body to become an instrument of an impersonal will? What is it that can drive a frightened physical body to carry out its part in a collective responsibility contrary to every physical instinct and desire? What is it that, in an instant, can override the automatism of the body long enough to interlard a day of horror with an act of pure compassion, a gesture of conscious human brotherhood? He was trained to kill. . . . What is man?

What quality or entity is there in this young soldier that can act above the battle, arrest his bodily activities, and substitute for them an act of almost godlike selflessness? Does this godlike thing *arise* out of his body-nature? Or is it the nature of a human soul? What is it that loves music with the passion of a devotee even while he lends his body to the business of war? Is it the crippled, shocked body? Or the spirit within?

For what are we making the new world, a planetary society—the body-nature that can be trained to obey implicitly the commands from without? Or the spirit within that has the power to break the spell of all man-made conditioning, of all body fears and instincts, and can act with tenderness and initiative?

What right have we to intervene—by education, by social maladministration, by systems of greed that breed wars of greed—between the spirit capable of such acts and the young body that is its instrument? What right have we to force any young body to act contrary to the impulses of its conscious dweller and director?

These are things we must ask and answer one by one, within the quiet of our own thoughts. Only when we have an answer, unequivocal and deep-rooted, will we have the invincible thought that leads to irresistible action. Such an answer would give us the power to overwhelm the entrenched interests of ignorance and greed that now threaten to make our next steps in social evolution a dark struggle, costly in human flesh and blood as well as in human patience and endurance.

C. J. Hambro, Prime Minister of Norway and one-time president of the Assembly of the League of Nations, makes the statement that Hitler's uniqueness has been that he alone of great-power statesmen understood that "*the thought precedes the deed* and that the spirit is stronger than any material conceptions can measure."¹ He acted on that truthful principle to found the great conspiracy against the human race. We can use the same principle to create and maintain a society designed to protect the human spirit and its Four Freedoms.

Scientific humanism attempts to provide the thought that precedes the action, the Idea of Man not only as the center and significance of his society, but as the interpreter between the As-Yet-Unknown and the Known, the formulator, out of his vision, of the universal laws and universal thoughts that underlie the manifested world.

III

Scientific humanism is a philosophy emerging out of our own times. It is based on a synthesis of our contemporary knowledge. Science investigates the "how" of

¹C. J. Hambro, *How to Win the Peace*

things. The religious spirit seeks the "why" of things. Scientific humanism attempts to fuse these two functions of man's mind, the rational, analytical, mental function, and the intuitive, integrative function. It is an attempt to clear away the confusion that results from our prolifically rich resources of analytical knowledge, of visionary aspirations, and of our consciousness of urgency in the face of a human crisis unparalleled in the history of man. It is a philosophy with an immediate program. It is not a philosophy of the ivory tower, but a philosophy of the field hospital. We are all in the front line of the Battle of Man.

The primary aims of scientific humanism as it is taking shape in the minds of the men and women who are contributing to its body of thought are these:

(1) A humanized and socialized science and technocracy, in which will be pooled the genius of the race in discovery and invention, and in the production and distribution of the basic goods and services which are now possible under a planned economy for a world community.

(2) A religious concern based on scientific mysticism, a synthesis of religious, scientific, and social thought, designed to investigate the nature of man, his potential powers, his place in the universe, and the type of society best suited to evoke his evolutionary possibilities. It will be essentially a religion of truth, evolving with man's increasing access to universal laws. It arises naturally out of the changes in advanced scientific concepts which discard the idea of the universe as a machine and are investigating the idea of the universe as growing.

(3) A new universal theory of education to promote

and protect our new social concepts and to free men's minds of prejudices and errors inculcated by propaganda calculated to darken men's minds and warp their judgment.

(4) A global democracy that is more than a political concept and which becomes a supreme effort to fuse all our thought, scientific, social, religious, and economic, into working knowledge upon which an intelligent social order can be soundly based and peacefully maintained. This involves a world community, global planning, political security protected by a world-peace intelligence service, a world police and air patrol able to move into action at an hour's notice as a preventive political service which would parallel a world health service for the prevention of disease.

(5) An intellectual-social integration as a means to a cultural synthesis to parallel the federation of states into a global democracy.

Is this a time for philosophy? And if so, what do we mean by philosophy?

Scientific humanism holds that the most important thing about a man or a nation is the philosophy he (or it) adopts. One important function of philosophy is to formulate general hypotheses, tentative solutions and plans of action, which are then to be tested empirically in the world of facts and concrete situations. Education in general, or any particular educational system, is simply a socially accepted (conventionalized) philosophy in action. The need for philosophy grows with the increasing complexity of the modern world, it creates unifying principles out of accumulated data. Its purpose is not to

give complete and final definitions, but to provide the tools (ideas) and methods (principles) so that men can work out a philosophy of democracy. So speak the scientific humanists who as educationists, researchers, and democratic thinkers have been formulating the views that emerge slowly and naturally in many places—laboratories, classrooms, and studies—among workers who have caught momentary glimpses of the larger continuum which contained them all. The modern philosopher yields to that vision and pursues it. He recognizes his responsibility as the synthesizer of a contemporary system of ideas. Fugitive theories, isolated speculation, precious data in unorganized profusion on the one hand awaited synthesis, on the other hand, intuitive personalities everywhere are crying out for confirmation of their aspirations and hopes. Here, surely, as never before we have the need for philosophers. And never before have philosophers had to face so staggering a piece of work; never before were there such vast accumulations of knowledge, in every science, in every language—never before so crucial a need for the underlying principles that can precipitate the fragments into an intelligible design for human living.

Enlightened individuals, in whom head and heart functioned co-operatively, set about sifting out of our accumulated knowledge the conclusions and theories which could be worked into a time-binding synthesis, into a kind of trial balance of our intellectual and social accounts, so that men of today could know just what they have on hand in assets, and what they faced in liabilities, and thus could shape a future course based on facts, not merely on selfish instincts. The philosopher is the char-

tered accountant who sees to it that we keep our accounts straight, inventory our resources from time to time, pay our bills, and plan for the investment of our accumulated wealth.

IV

There have been many forms of humanism in the past. Some individuals are confused by the use of the word, because they associate it with one or another form of humanism with which they have become vaguely familiar. The most familiar is the classical humanism which, since the Renaissance, has fostered the study of the "humanities" by way of the arts and classical languages. In the beginning of modern humanism, Greek and Latin were merely the means to an end, the means to translation of ancient and forgotten literatures of the ages when men's minds were active in the field of intuitive speculation, especially in the days of the mystery schools which taught the disciplines that led to direct insight of the natural mysteries. It was not long before the impetus of the Renaissance ran down, and then the learning of Greek and Latin became ends in themselves; men forgot why the classical languages had been essential to creative thought.

In other times, humanism was associated with anti-clericalism, when the dogmatism of the church was bent upon frustrating men's search for truth. Today there are groups of humanists whose chief end is anti-clericalism even though anti-clericalism is no longer a means to freedom in scientific research.

There are groups of humanists whose philosophy of

naturalism evolved out of a protest against a lifeless theism. They found their means in the science of the nineteenth century and the early twentieth century which revealed that the universe rested upon the most precise and beautiful laws of mechanism. The mechanical world was to them a world of wonder far more astonishing and satisfying than the universe that depended on the whims of a man-made deity of unpredictable moods. The means became the ends of naturalistic humanism—but not of science.

There are other types of humanism, each arising out of some phase of human evolution. Scientific humanism is itself evolutionary, a dynamic conviction which responds to the life within, knowing not only that man must be the measure of all things, but also that all which man brings to humanism must be accounted for. So long as humanists value truth above dogma, life above form, scientific humanism will keep pace with human longing and enterprise. Now that science has outgrown its materialism, scientific humanism incorporates within itself the new mysticism which mounts on the shoulders of science to catch the far view.

John H. Dietrich in *A Humanist Looks at Mysticism* writes

I submit that we might learn something from those mystics who aspired within the limits of the mind to identify themselves so completely with the objects of their religion I am sure that a little more of the mystic aspiration and fervor would add tremendously to the significance of liberal religion which is in great danger of degenerating into a cold formula of intellectual concepts. There is no doubt that liberalism in adopting the scientific method has come into

possession of an increasing body of sound knowledge, that it has been successful in diagnosing our more serious ills, that it has a well-defined vision of the goal towards which men should travel, that it is fully aware of the necessity of mankind itself transforming the life of society. But somehow it lacks the emotional drive to generate the concrete enthusiasms which are essential to the making of these effective in our individual and social lives. We discuss these things week after week, but the mere discussion of them can never generate the religious fervor which alone can arouse people to their accomplishment. And I believe that this can be done only by achieving something of the passionate desire of the mystic to identify himself with the objects of his religion, to lose himself in the contemplation of those objects until they become a vital part of his psychic nature. When we strip mysticism of all its extravagances, its real meaning is the inward possession of great ideals and the transformation of character and purpose by the influence of these ideals, for it is only by this method that religion and morals have any transforming power.

Alfred Stieglitz, a central figure in the contemporary American arts, who has done so much in making articulate a vigorous philosophy of the role of the arts in self-cultivation, believes in *experiencing* what one believes in theory. "Unless one creates in embryo," he says, "what one wishes to see flower in full, unless whatever a man does is the symbol of the thing he claims to be fighting for—then what he says and what he is fighting for in the end can have no real significance."

The scientist or the artist, or any creative worker whose disciplines carry him directly into the field of cognitive truth, finds in his work his religion. But it is only the few among us who are the pioneers, whose

status is that of the seer. For the rest of us there must be a formulation of ideals, the creation of symbols, which serve as the objects of meditation and contemplation, of worship and identification. For those who cannot yet pierce the veil for themselves, who cannot enter the As-Yet-Unknown, there must be an exoteric temple that gives assurance of the mysteries unveiled and of the integrity of the interpreters of those mysteries, and of the universality of the laws by which society should be governed. The mysticism of the researcher in any field is the outgrowth of his disciplines, his skills, and his creativity. The mysticism of the average man is his faith in those who are his pioneers, who are blazing the trails he can one day travel, charting the resources of the new world he is to colonize.

If men turn to science today rather than to religion for safe guidance, for the symbols of their hope and contemplation, it is because they feel that in science, not in institutionalized religion, are the springs of new truth. Science has been abundantly productive of fresh, upsurging ideas, theories, applied methods, and promises of a richer and more abundant life. Science, in a word, is capable of continuous inspiration. It is true that science has not taught man how to become fit for the more abundant life, but it has pointed the way to its achievement. In the last century, which has been one of uninterrupted inspiration in science, institutionalized religion has been static and inert. It had no seers to offset the scientific knowledge of the *mechanism* of the material world with any dynamic proof of the *intelligible nature* of the world of consciousness. Religion stood aside, adapting itself as best it could to scientific knowledge, until the

sciences contradicted their own materialism by piercing through matter and moving freely in a world of field-plenum dynamics. It is not the religious institutions that we have to thank for the restoration of man from the status of a machine to the status of a self-directed being. It is science, *in the pursuit of truth*, that has instituted its own revolution of liberation. Scientific materialism bequeathed to us the machine which is the keynote of our new civilization. But while technology worshipped the ideal of the machine and while men bowed to the hopeless religion of mechanism, the machine was the master of man. Fascism is the residual religion of the machine. Fascism is passing with the disintegration of that religion. Man is the master, and the machine is his tool—that is the faith of scientific humanism.

"Only those who live first and who keep alive have earned the right to use the machine," writes Lewis Mumford,² "for the man who does not ally himself with the new forces at work in the world denies his humanity and becomes smaller by his use of the machine. He lacks the courage and disciplines to achieve order in himself and becomes the victim of his instruments, and ends by becoming a mere attachment to a mechanical contrivance. The machine must be used as subordinate to the human direction, as part of man's organic equipment, not as a substitute for a deficient organ."

In order that men may "live first and keep alive," they must have an incentive more powerful than that provided by scientific materialism. There is a deep-seated teleological instinct in man that demands evidence of

² "The Metropolitan Milieu," in the symposium, *America and Alfred Stieglitz*, copyright 1934, by Doubleday, Doran, and Co., Inc.

purpose as the prerequisite of abundant living. That thought must overshadow our planning of the new world, for social security is not enough. men must be taught how to accept and employ social security. They can only do that if life has meaning and a goal. Those whose lives are today socially secure are only infrequently free persons living abundantly. We find our free persons among those who, whatever their economic status, are allied to some purpose and actively engaged in working towards some goal. It is the purposeless person who is a problem to himself, his family, and his society. Even when his ends are illogical or downright evil, the person with a purpose can always find a following. It is *purpose* that galvanizes men, singly or collectively, into loyalty and action. The secret of a lasting peace is a purpose in society as dynamic as the purpose of winning the war.

Surely, if this instinct lies deep within men, we cannot ignore it in our work of creating a coherent theory of human nature. Purpose is an intangible, it belongs to the inner nature of man—and perhaps to the real nature of the universe.

The new society must strive for a balance between material and spiritual progress. Our morals and ethics of the future must see to it that the soul is not starved in order to clothe the body, or that the mind of man does not travel on flights of pure speculation and forget that children must be fed, or that the artist does not become precious and deny his share of responsibility for slum clearance. Facts and values, science and morality, labor and leisure, culture and politics, these are not dualities but related poles that create between them magnetic fields within which man lives and moves and has his be-

ing. It is the tension between poles that generates energy and light.

V

Scientific humanism finds no need for either a mechanistic science or a super-naturalistic religion. Analysis and dualism belong to the old order of thought; synthesis and correlativity to the new order of thought which finds a place in nature for spirit, and in spirit for nature. Science no longer finds dualism of mind and body tenable; philosophy no longer requires the dualism of matter and spirit. Body and mind are two poles of one organism; matter and spirit the two poles of one universe. Cosmic mind does not operate outside of nature, nor nature outside of cosmic mind.

The view that "facts" and "values" are two mutually exclusive domains is a product of an elementalistic theory of nature. The view that science has no emotional basis—that the investigation of the world of facts lies completely outside of the world of values—is as mistaken as the view that the world of values, the world of ideals, as seen through the eyes of human desire or aspiration, must necessarily lie outside the world of facts. The world of facts and the world of values should not be treated as mutually exclusive domains, for the discovery of truth and a program of social reform must go hand in hand.

The two worlds may be out of alignment, as indeed they have been for a long time, but the cure for the situation is not to discard one for the other, but to bring the two into mutual relationship, to produce what the mystics call *at-one-ment* between them. Humanism believes

in a shared world. It looks forward to a planned economy and a socialized industry, and it believes that human intelligence can be trusted to achieve these things when the tentacles of mechanism and super-naturalism are removed. Nevertheless, the knowledge that goes into the making of the new world is a constantly enlarging knowledge, fed by many tributary streams. Scientific humanism rejects revelation in economics as it does in religion, revelation being here defined in the orthodox sense of absolute truth, once revealed and embodied in a scripture, whether revealed by Jehovah or Karl Marx. What is being continuously revealed is an Idea, a dynamic, expanding, viable idea which is incorporated by man from age to age in proportion as his mind is ready to recognize and assimilate it.

The human mind should be constantly on the alert to discover those individuals who are specially equipped to add to that emerging Idea. When an additional aspect is extracted from the Unknown and is ready to be added to the Known, man is not faced with the necessity of denying everything that has gone before in order to demonstrate his loyalty to what comes next. He is logically responsible for fitting the new theories or laws or enterprises into the accumulated life of the present, discarding the outworn parts of the old, not with venom or fury, but thoughtfully, realizing that the outworn parts of a garment show where it has served most and come most constantly into friction with the world of action. Discard what is no longer necessary with a grateful thought for its good services, but "let the dead bury the dead," and go on with the incorporation of what is new and necessary to the future. If we have fixed ideas of

what constitutes revolution and wait for these evidences to appear, then we may have revolutions of the conventionally visualized types, but if we have a new idea of revolution and open minds to recognize and welcome the changes without fret or hostility, we may create a new kind of revolution, functionally and smoothly integrated into our daily life, so that great changes may come about without a day's delay in the delivery of our mail, or the cancellation of a single game of baseball.

The kind of social change we shall have will depend entirely on our ideas and on the enlightenment with which the peoples of all countries face the implications of evolutionary development of man and his society.

A decade ago George Soule published a book called *The Coming American Revolution*.³ It is still an important book, and an example of the scientific method applied to social history. Soule believed that the revolution was already under way, and his justification for saying so arose out of his analysis of the four major revolutions of modern times: the English Revolution, the American Revolution, the French Revolution, and the Russian Revolution. If the book were appearing today, he would probably add an analysis of the Chinese Revolution.

Soule's conclusions are calculated to upset our conventional ideas on revolution and to disturb our conviction that "history stopped dead in the last paragraph of the textbooks." The feeling that everything in our day is permanent and sensible at last, and that "society which has lived through such a vast turbulence, so much marvellous transformation" has become fixed at last, is likely to characterize a people which has founded its ideas on

³ Copyright, 1934, by The Macmillan Company

a previous revolution. "To win that revolution and preserve it in its infancy, one had to regard it as the achievement of complete felicity, one was obliged to enshrine its leaders and rubricate its doctrines. To think of change thereafter seems disloyal to the old. Thus the Americans and the French have long been the most conservative of peoples. Doubtless the Russians will soon become so."

Inevitably, nevertheless, there come periods like the present, when people become conscious that deep changes are taking place, old ideas are in disrepute, and new ideas are emerging in surging waves from the depths of human aspiration. Soule believes there is a pattern of revolution which underlies all the major changes in human society, but that our popular notions of revolution do not coincide with that pattern. The popular fallacy he sets out as follows.

1. Capitalism will soon come to an end by a final collapse.
2. A revolution begins and ends in a violent overturn of political government.
3. Nothing is essentially changed or can be changed before this overturn; after it, a brand-new order is suddenly set up.
4. The revolution is brought about by rioting mobs who overrun the capital and loot and massacre; there are barricades in the street, and the air is noisy with gunfire.
5. The riots and mobs result from the discontent of an oppressed class whose misery is so profound that it is driven to revolt. Actual starvation is the usual motive for revolution

Every one of these beliefs is unfounded. Revolution is actually a long process of disintegration of the existing order, due not to the discontent of oppressed masses but to the ferment of ideas, to new orientations, and to a new sense of possibilities going on in the minds of intellectuals —aided by the discoveries and inventions of the period and the data accumulating from social experience. The revolution is practically accomplished before violence develops, sometimes violence obstructs and delays the consummation of the social changes, but it is forced upon the revolutionary movement by a desperate rear-guard of the old order, and is not an inherent part of a revolutionary plan.

Having pointed out what revolution is not, Soule then describes the pattern of social revolution. First there is a basic change in the ways of society, usually due to mechanical or economic developments, such as the growth of the wool industry in England. (The Chancellor of the Exchequer still is appointed "to the Woolsack" and actually takes his place in the House of Commons on a symbolic woolsack, dating from the days when England was determined that her Chancellor would not be allowed to forget the source of her wealth.) The development of transportation, the founding of international credit, the invention of machinery, the discovery of markets are among the inevitable causes of social changes. Each change brings to birth a new class of citizens who become primarily important to the welfare of the country. Oppression comes as a result in the shift of power. But even the oppressed classes remain loyal to the old regime because of lack of understanding of what is afoot. It is not the oppressed classes who cause the revolution,

but the new class gaining potential power. It may take a long time for the new class to become conscious of its opportunities and to assume a revolutionary aspect. As this process develops, ideas begin to emerge. The intellectuals, who become aware of the significances of the adjustments already under way, start to formulate theories. They begin to attack the evils of the old order, to satirize the absurdities of the weakening rulers, to destroy popular loyalty to the old regime, and to create a new sense of confidence and direction in the emerging new order. "In devious and confused ways this intellectual ferment makes people conscious of what is going on. It creates the mental apparatus which is necessary as a tool to bring a new society out of the old . . . Divisions appear within the old regime . . . reforms are made which strengthen the rising classes without satisfying them . . . programs of reform are often supported by moderates as an alternative to revolution. . . But in reality reforms are often a prelude to revolution. It makes little difference whether these reforms are voluntarily granted from above or wrested by demands from below . . . A reform sufficient to avoid revolution would be a reform equivalent to revolution."

Later comes a crisis when the old regime can no longer carry on alone; the new class needs only to consolidate and exercise its power in order to supersede the old rulers. When the shift is made, the possibility of violence enters in. "It is rare indeed that those who begin a revolution end it, but without their preparatory work the final leaders could not rise." Violence is due to a final effort of the members of the old regime to regain power when the first shock of the crisis is over, or to the effort

of the more extreme elements in society to push the revolution farther than the moderates had planned. This is the stage at which revolutions usually appear in the history books.

We should know these things and prepare by education for the changes that inevitably lie ahead. The more generally the electorate is enlightened, the greater the hope of achieving social changes without violence. We have a chance to create a new kind of revolution. Will we take it? Can we so re-orient ourselves that our code of human values will be shifted from a preoccupation with possessions, wealth, and private power, to the idea of co-operative living in a world community based on the principles of social-planning and self-cultivation? If a code of values, ideas, and ethics can be formulated in time and in sufficient clarity to become generally recognized before the final revolutionary stage is reached, then we may save ourselves years of chaos and suffering. That code must be based on the nature of man.

The basic idea that shook France to its foundations was the theory of the hedonists that man has the right to be happy. It was born of the intellectuals in the salons of the eighteenth century, but like an unfilterable virus, it slipped through the walls of society and infected men and women who put ideas to work. It was new and dynamic. In twenty-five years, it had reached the common levels of society, and when the moment came for violence, it drove the organized revolutionary mobs into the gardens of the Palais Royale to strip the trees of leaves and wear them in their hats as symbols of their solidarity. The whole revolutionary process of social change became for the masses a cry for human happiness.

In the quarter century since the acceptance of the principle of relativity, its implications have been filtering through society at every level. It has revolutionized science, thrown our old habits of thought into a tail spin, played havoc with religious dogma, and at last played Prince Charming to the Sleeping Beauty of philosophy, galvanizing it into new life and vigor.

It is difficult to explain why men and women who never hoped to understand the principles of relativity recognized in Einstein a supremely significant human being and turned out into the streets of American cities, when he came as a refugee from Nazism, to cheer him and to praise him. No one was more astonished than Einstein. But somewhere deep within the collective human consciousness was a recognition that in this principle of relativity was the seed-idea which could serve to generate a new way of thought consistent with the stage of human evolution which was being expressed in social changes of our times. The visible and tangible proofs of the inevitability of a world community cried out for scientific proof and philosophical conviction of the interrelatedness of man and nature.

The first international co-operative project at the close of the First World War was a scientific expedition to observe a total eclipse of the sun which Einstein had indicated as the means of proving the theory of relativity. That handful of men with their cameras and dark glasses, watching a phenomenon that once terrified unenlightened men, was the most revolutionary group in our contemporary history. They proved that the old "law of identity" which lay behind our two-valued, elementalistic philosophy of the Western world, with its individualism

and absolutism, was no longer valid as a governing idea, since the human mind had evolved to the place where it could recognize a higher and more inclusive law, the law of relativity.

All things, by immortal power
Near or far,
Hiddenly
To each other linked are,
That thou canst not stir a flower
Without troubling of a star

Yet it is not enough for men to conceive an idea, even an idea such as is imbedded in scientific humanism. If the idea is viable, it must pass through the whole cycle of creation, from conception to birth, from birth to maturity. The world is strewn with abortive ideas, the still-born theories that lacked the warm red blood of faith and the nervous system of action. No idea can remain on the plane of mental visualization and have any effect on the world of steel and stone. There must be integration between idea, faith, and action. Scientific humanism aims at this very thing. Humanism recruits the highest scholarship, the finest techniques and experimental forms, informed leaders in the arts, education, politics, economics, science, and religion, as translators of theories into applied thought, and thence into human action. It is humanism at the source of inspiration and humanism at the lowest level of need.

The least informed voter has an equal vote with the most enlightened. Democracy was never intended to make ignorance and self-interest of equal value to enlightenment and responsibility. Today special interests in many

quarters bolster their power by preventing enlightenment of underprivileged classes and so control their balloting. This is the anti-democratic method. But democracy implied the education of the electorate to the point where every voter had the means of intelligent choice. Freedom of judgment is one of the great freedoms, but judgment is only free when it is free of imposed or unreasoning prejudice.

VI

R. B. Perry in *The Meaning of the Humanities*⁴ gives a definition of humanism. In it, he attempts to outline the qualifications of the individual man functioning in a humanist society.

That man owes his dignity to the possession of freedom requires little argument. His dignity may be small, great, or even non-existent, but what dignity he has or would have, if he had any, lies in the capacity of the individual to choose for himself . . . It is in respect of his freedom that a man is the image of his creator . I define the humanities, then, to embrace whatever influences conduce to freedom . . . By freedom I mean enlightened choice I mean the action in which habits, reflex, or suggestions are superseded by an individual's fundamental judgments of good and evil, the action that proceeds from personal reflection and integration. Choice determines where compulsion shall be gladly accepted, or turned to good use, or circumvented or hopelessly resented. Liberty has to do with the action of circumstances upon man, freedom with man's action upon circumstances. The extent to which a man is free, that is, exercises enlightened choice, depends in the first place upon the extent to which he is aware of the possibilities. Insofar as a man is ignorant of what there is to choose, alternatives

⁴ The Princeton University Press

are eliminated not by rejection but by accident. Freedom is proportional to the range of options. The first condition of freedom, then, is learning.

Learning, imagination, and sympathy constitute the conditions of that freedom which I have defined as the norm by which to judge whether any study or other occasion of experience is or is not a "humanity." The propriety of the name itself rests on the assumption that its norm is primarily concerned with a man. The term "man" here means the natural man, not the physical man in any restricted sense, but the actual man, of metaphysics as well as physics . . .

Humanism testifies to the eminence of man over the rest of creation, rather than in the eminence of certain species of men over others. It sets a high goal of perfection which only well-endowed men can hope to attain. It admires genius and encourages men to seek distinction. But to identify humanism with the exclusive attainment of a preferred class is a betrayal of its respect for universal man.

There, perhaps, is the distinction between scientific humanism and some political and social ideologies which profess to foster man's best hopes. In some of these, there is a levelling process which begins by the arbitrary choice of a type of man to be the standard for all. That choice may be low, or it may be high in the scale of human development, according to the nuclear idea of the ideology. Standards of living may be dealt with by this arbitrary choice, but not standards of life. Humanism fixes no inflexible pattern for man of the new age. Instead it creates an ideal, an ever-moving ideal, for scientific humanism admits that it knows not what will be the future achievements of man. Yet the "tip" of human evolution is made up of types of men who can be the ideal of all men who come after them. Whenever a type has been established by evolution, it can be multiplied endlessly. That is why

scientific humanism looks always to the tip for the emergent man. All sorts and conditions of men are simply men at varying distances from the tip to the tail of humanity. But all men are on their way *toward the tip*. And the means by which to hasten the process of movement up the scale of human values is education—education in its widest sense—an education that recognizes aptitudes and develops them, sets no false values on academic standards to the detriment of values in manual skills, education that evokes the deepest emotional richness and variety through the arts and through a program of physical and psychic health. The education of scientific humanism begins at birth and ends when aged and happy hands have fallen from their last new enterprise. At no point between, in the faith of scientific humanism, is the human being incapable of growth in skill and consciousness. "Freedom," says Michael Straight, "is a condition in which ideas find expression in action"⁵ Freedom, then, is born of two elements, thought and action, and nurtured by a sense of responsibility and conditions of choice. Those who would foster the freedom of man must, as a consequence, see to it that thought and action are continually evoked, throughout life, in all men.

Gallup polls may be of statistical importance to enlightened administrations by pointing out where the most pressing needs for education lie. To make a poll of public opinion on world organization before any educational work has been done on the plans, hopes, and benefits of world organization is not to get an answer which is public *judgment*, but only to diagnose public prejudice. The

⁵ Michael Straight, *Make This the Last War*, copyright, 1943, by Harcourt, Brace and Company, Inc

educationist of the future should regard these polls as data on the symptoms of public reactions which require treatment, as a preliminary to intelligent democratic action by means of education.

H. E. Sigerist, the American medical historian, some years ago investigated Soviet medicine and recorded his conclusions in *Socialized Medicine in the Soviet Union*. He searched for the underlying cause of the sweeping changes in public health principles in Russia and wrote: "Marx never held an office, never stood on a barricade. He sat at his desk and wrote, he interpreted the world and showed how it could be changed—and millions of people arose and changed the surface of the world."

Now we need other thinkers who can tell us how to change the mind of the world, thinkers who can guide man in the choice of new orientations which concern more than his economics, changes that strike below the surface and create new forms where all creation begins—in the subtle world of formative energy. We can no longer say that "human nature does not change." What changes is the human mind.

THE NEED FOR A NEW WORLD VIEW

I. THE PROBLEM STATED

Today we are actually witnessing the collapse of one type of civilization and deciding the character of a new culture. All our institutions are being weighed in the balance, and many found wanting. Such a period can be an epoch of unparalleled opportunity; it can mark a creative stage in social advance. But if this crisis fails to evoke the right response to its obligations, it can constitute a juncture where civilization turns backward toward some ancient despotism, replayed in modern dress on the stage of human history.

Which path the twentieth century is to take we do not yet foresee. Whether in fact we shall build a new and better world is the question the present generation must answer. This is what constitutes the crisis of our time.

The coming period may well be called the era of air-age global politics. We see before us, taking shape as we look, the technological unification of the earth. Inventions have removed the barriers of distance and geography. The phantom of isolationism has finally been dispelled. But this very togetherness of man is what presents us with our new problem. "Mine is the duty of informing Man that it does not signify how fast he sends the mes-

sage if he has not a message worth the sending," are the words Cora Williams puts into the mouth of Hermes in her *Olympus*. Unless the technological unification of the world is accompanied by a corresponding intellectual and political integration, our technologies will have dehumanizing rather than humanizing effects. We know from bitter experience that technology can serve as an instrument of exploitation in the hands of selfish groups. If this continues into the future, our air-age technologies (the airplane, radio, television, and so on) would be employed to enslave mankind in a wider despotism than men have ever known before.

This brings us face to face with our specific problem: How can we secure that intellectual and social unification of the peoples of the world so as to prevent the new slavery of global technologies? How can we create a medium for the development of the planetary humanism or the global democracy which is so necessary if we are to provide the cultural matrix for the era of world politics? Unless free peoples everywhere do unite in the cause of all mankind, we are certainly not going to prevent the development of the master-slave relationships of the global technologies. But how *can* we secure this intellectual and social co-operation and thus guide the developing economic-political mechanisms of the world so that man's humanity to man is guaranteed?

II THE NEXT OBJECTIVE

The answers to these questions may be found in a general way by appealing to an analogy taken from the biological field. The problem the world now faces in

formulating the cultural synthesis which we humans must progressively put into operation is similar to that nature faced when she advanced a step in the ladder of evolution. Simpler organisms, mere colonies of agglomerated cells lacking a central nervous system, have no means of mobilizing their diverse energies and adjusting themselves to their changing environments. They have little capacity to learn by experience, to foresee future contingencies, or to solve complex problems. But when the processes of biological evolution produced the higher organizing mechanism called the central nervous system, the animals that possessed it were more adaptable, were better able to survive under complex conditions, and were more secure under their survived state.

The purpose of this analogy is to suggest that we need some sort of structure (organ) in society to accomplish in the field of thought and culture (ideology) what the central nervous system makes possible in the field of animal behavior. Just as nature had to evolve a structure to unify and integrate the responses of complex organisms, so society must evolve into a superorganism with supranational institutions which can achieve for society what the cerebro-spinal axis provides for individual organisms. In brief, what we need is a system of thought, a set of ideas, a concrete program of action, and a new equipment of social institutions which will be able to provide unity of purpose and a mobilization of energies—and thus perform the same functions for the life of society that the cerebral cortex performs for the biological animal. This “world sensorium” (to give the social structure a name) will serve as a center of control and a vehicle of social integration to bring order out of threatening chaos.

and harmonize the conflicting interests and programs of human groups the world over.

The nations of the world now face the supreme task of co-ordinating the needs of men with the sources of supply which can satisfy those needs, of harmonizing the interests of men so that none suffer unnecessarily at the hands of others. To solve these and the other problems which are being created, we need to co-ordinate what we know about man, the world, and human history into a new cultural synthesis that will provide the ideological basis for a universal civilization. This means, to be specific, that we must now turn our attention to the problem of building up a world consciousness and an international community to replace the nationalism and patriotic motives of the present outlook. This, then, sets up one objective for our collective human efforts.

This conception is rapidly winning ground. It is no longer the vision of a prophet coming from the mountain top. C. J. Hamblin, in his book *How to Win the Peace*, argues that we must create a loyalty that will transcend nationalism, partisan ideologies, and class antagonism, if we are to "win the peace." Other examples of this new way of thinking are expressed frequently in our current literature.

When we consider this problem of finding a way to offset the narrower loyalties and rise to a higher "patriotism" than love of country, we come across the conception of man offered by scientific humanism. Here loyalty to Man becomes the central, global motif of the new society, and we present this conception to those thinkers who are now concerned with the problems of the post-war world.

III. HUMANISTS IN CHAINS

Recently a prominent individual, tied by circumstances to a conservative institution, but possessed of a degree of enlightenment quite beyond what is approved by his group, was described as "a humanist in chains." In a broad sense this is a fair description of every man—each of us is a humanist in chains, for even in his day Rousseau realized that men are born free but live in fetters. But if we humans are in chains, we are today more socially conscious of our shackles, and what is more hopeful, are testing the tensile strength of our bonds to see what chance we have of breaking them.

Apparently there are many "humanists in chains" who are beginning to seek new outlets for the life impulses. Recently a scientific humanist who occasionally puts out brochures on the subject stated that the response to the last publication was amazing. Individuals and groups everywhere wanted information. If one may judge by the interest shown, this means that the latent humanism in men must already be a force of considerable proportion. The problem now is How to release and direct this force? Perhaps one of the first steps is to give it a name, a semantically significant term around which the latent social aspirations may cohere. Many men do not realize the importance of their private views nor realize that though they may be personal, they may not be unique. In fact, they may be shared by very many more like themselves scattered over the face of the world—views slowly evolved by life experience and world events, the trickles and rain drops that slowly but inevitably gather strength as they move downwards towards the sea levels

of world thought and world action. The term, we suggest, is scientific humanism.

This means, and rightly so, that scientific humanism is not a philosophy created in a library by one man or a group of men, and superimposed upon a groping society through propaganda or organizational methods. It is a philosophy emerging out of the life and feelings and thoughts of men everywhere, men of the past as well as men of the present, men of the east as well as of the west, the thoughts of age and the thoughts of youth, thoughts still warm with the blood and the breath of living men. The group of those who now consciously subscribe to the philosophy of scientific humanism is merely those who have undertaken to co-ordinate what already exists into a form more easily communicable to an ever-growing community of free men and women. They make the attempt to synthesize the essential contributions to this central ideology wherever they may find them. Their work is preliminary, early experimental efforts in a new field.

We consider bibles and religions divine—I do not say they
are not divine,
I say they have all grown out of you, and may grow out of
you still,
It is not they who give life—it is you who give the life,
Leaves are not more shed from the trees, or trees from the
earth, than they are shed out of you.

In some quarters there is fear about the future. Many persons despair of our winning the peace and are even now talking about the Third World War as an inevitability. But it may be that we are somewhat nearer the

solution to some of our problems than we see at the moment. So many events have already come to pass. So many people are ready and waiting to act. Apparently what we lack is some supremely potent catalyst. What is it?

Apparently one thing that is needed to set off the chain of reactions is a clear statement that we have cast off from the past and are now ready to initiate the sequence of political-economic changes which a universal or planetary civilization requires. If we use the word planetary humanism as a name for this commitment, this means that we have set ourselves a new goal—the conversion of a broad subjective will-to-good into a socially actualized structure of a world-embracing culture—an economic-political-ideological synthesis.

Accordingly, as planetary scientific humanism looks into the future, it foresees the possibility that the culmination of the drama of human history will be achieved through the emergence of a vehicle of planetary co-ordination, a center of intellectual-social dominance (a world sensorium) to serve as an organ of over-all global strategy, conferring unity of purpose and a sense of direction upon the chaos of unguided social change. This functional group of world co-ordinators that administer the collective policies of world humanism would constitute the "world cortex" of the social organism.

IV HUMANISM AND PLANETARY INTEGRATION

Ideas that are vast in their implications may be as simple in statement as they are revolutionary in their appli-

cations. Humanism has already given us several such ideas, proposals potent enough to blast our old ways of life wide-open. Already we have blueprints sufficiently complete to give us the framework for a new society, could we but put these plans into action. Dozens of such plans are already in existence. What is required is that we take the best of these plans seriously enough to put some composite plan to work.

There are enough enlightened people in the world, loosely organized in groups, to bring about readjustments in human relationships. What is needed is that we effect some co-operative action among such groups as have already professed their faith in a new society and a new consciousness, and arrive at some agreement upon the points of contact and common thought. Practically this calls for a federation of such groups, able to create out of their varied presentations the common, fundamental principles that will be the foundation stones of the future society. Once they can agree on these primary principles, the means of working out plans of action in specific fields will open up. This is a problem of discovering an approach to the largest number of persons in a way that will arouse least resentment and elicit a maximum of integration.

What we here face is not so much the problem of integration within the group, as, more important and more difficult, the question of working out means of co-operation between groups. We need integrative devices for locating each group functionally in its own place within a world network of groups. This federated group, living and expressing the principles of the universal society, must be able to function co-operatively before the persons

in it can make any gesture towards political parties and issues. What we have in common should be sought out and emphasized.

One of the most effective groups which has thus far appeared is, of course, the war-born United Nations. Here, for the first time since the collapse of the League of Nations, we have a developing framework of political groups (nations) basically organized towards the same goal: defeating the Axis. But does such an organization give promise of developing in the post-war era into a kind of mental foetus, foreshadowing the later emergence of a true planetary society? If so, our previous analogy should give us the general outlines of our answer.

After the entry of the United States into the First World War, Dr. William Alanson White wrote a brief essay on "Thoughts of a Psychiatrist on War and After" (1919). Here he likened the period of great social change to the reproductive process in the single-celled organism. This includes, first, a complete breakdown in internal structure, then a division of the cell into two parts, followed by a restructuralization of function in each new half. According to Dr. White's conception, the breakdown of war is a necessary step in the rejuvenescence of civilization.

If one is permitted to speculate further along the lines of this analogy, one might suppose that what we need today is the establishment of a process which reverses what happens in the division of the cell. The individual cells in Dr. White's analogy divide and go their separate ways. But socially we cannot be content to terminate the story at this point. We must now think in terms of the next highest level of integration, which in the bio-

logical analogy would correspond to the subsequent aggregation of well-developed individual cells into a cell-colony: a higher organism on the multicellular level. In the corresponding social integration, new (higher) forces of social unification must be set up, so that units attract and unite, two by two, and four by four, until the seemingly unco-ordinated entities that now constitute our society become co-ordinated and synthesized, creating again, on a new and higher level of organization, that subjective oneness of the level from which the constituent parts emerged.

Just as the electromagnetic field will organize the diverse and random motions of molecules of an iron bar into a coherent form and produce a macroscopic magnet, with a north and south pole, so socially we need to bring into being centers of social dominance which, like polarizing fields, will give unity of purpose and direction to the restless, goal-less millions of humans with their many conflicts and cross-purposes. When this happens we shall have a global axis, the only kind of mundane axis worthy of its pivots. In that day we shall have the federation of groups, organized (polarized) towards the same goals, expressing the common fundamental principles of the higher planetary civilization. The cell idea of the fascist and communist organizations and the infiltrations they practice are phases—lower forms—of this group idea, oriented in terms of special (selfish) interests, whereas what we require is a supra-national, supra-party, supra-racial organization.

Some persons profess to have a fear of the kind of society global humanism is depicting. Such individuals will visualize planetism as fascism on a world-wide scale.

But this difficulty expresses a misplaced apprehension. The answer to the objection is a very practical one: either world order or world chaos, with not much to choose between the extreme limits of either. But it must not be forgotten that scientific humanism lays as much emphasis on individual responsibility, development, and participation as upon collective co-operative action. Humanism does not merely attempt to justify a democratic way of life, it insists that in education for democracy every intelligent individual will be roused to participation and ultimately a common voice. Common ideals and aspirations of modern man will *direct* the experts and specialists, and by vigilant watchfulness will ensure that the values demanded for human life shall not be overshadowed by the dogmatisms of fragmented agencies which would sacrifice human interests to intellectual ideas.

Many attempts have been made to provide a theoretical justification for democracy as a political theory and a way of life. Most of such attempts, whether in terms of religious, metaphysical, or purely secular presuppositions, can be criticized. The lesson is that we should give up the attempt to justify democracy in the usual way in which this is undertaken. In a sense the problem is artificial. It is in the nature of a pseudo-problem.

The statement that the problem of "what kind of government is best" is artificial means that we have not paid enough attention to the semantics of the situation. It is only by separating himself psychologically from the "masses" that an intellectual or a liberal can presume to discuss the question of what kind of society the people (masses) should have. But a humanist does not separate himself from humanity—he starts out as one of the people.

and asks what he, as one of the masses, wants. And as one of the masses, the humanist believes that what the masses want the masses ought to have, even though under special conditions—ignorance of what is “really best for them”—what the masses want may actually not be the best thing for them, according to the opinion of someone who claims more expert judgment than the layman possesses.

This means that that government is best for the majority of the people which the majority of the people decide they want. For a civilized society, this presupposes that the masses are socially free to survey and discuss the values and defects of alternative forms of government, that they are equipped with a knowledge of the facts necessary to form opinions, and that they are in a position to change their convictions as time and experience broaden their views. Such a government is best not because it is democratic, it is democratic because by popular choice it is the one deemed best, i.e., what at any given time the people want.

Fundamental ethics are fairly simple. The working out of ethical ideas into the mechanism of administration is difficult. “A new commandment . . . love one another,” is the simplicity of genius. The Four Freedoms embody that new commandment in a modern form. They, too, are extremely simple in expression. Every normal man and woman, anywhere in the world, can grasp the Four Freedoms in terms of the family unit and the individual person. The working out of the Four Freedoms in terms of practical religion, practical politics, practical economics, practical science, and practical education means literally a remaking of the world into a new earth and a

new humanity. The Four Freedoms constitute the ideal; the working out of a society based on the Four Freedoms will be democracy in action.

On this view "expertness" and the "century of the common man" are not incompatible. We need not less, but more, expertness—much, much more. We need armies of trained, enlightened, trustworthy technicians of every kind for the new society, experts in every field, social and scientific, to embody the will of modern man. There is need in government for advice by specialists such as medical men, economists, educationists, and many more; but the people themselves, after listening to expert testimony, should decide for themselves what choices to make when they are affected by these choices. Whatever affects the people as a whole should be decided by the people as a whole, either directly or indirectly through chosen representatives sensitive to the trends of contemporary thought

*V DEMOCRACY IS WHERE YOU
FIND IT*

As we go on in the work of planning a new society, we must all guard against the hypnotism of old words. We must see to it that if a government is set up which calls itself democratic, we will concede that it *is* democratic only when we have seen how it responds to democratic thought. If a government is set up which neglects to call itself democratic, we will also reserve judgment until we see whether or not it is democratic in action. We should always remember that under the banner of democracy the Western nations—all of them—have been

guilty of grossly undemocratic conditions. We should also remember that without having invented the label of democracy, the Chinese people have lived democratically for three thousand years. In pre-Christian days, the Chinese abolished primogeniture when they saw that it would lead to the building up of great estates. When in a period of complacency a class of commercial aristocracy began to arise, they quietly dislodged them and reaffirmed their belief that scholars, farmers, and workers of all kinds ranked first in the scale of social categories, and the lowest ranks were reserved for financiers and soldiers. So let us avoid confusion due to careless assumptions and avoidable ignorance.

We must remember also that sometimes modern inventiveness is merely a restatement of forgotten truths. The new discipline of semantics, only lacking its neat Western label, was one of the tools of Confucius. Lin Mousheng, in *Men and Ideas*, an informal history of Chinese political thought, tells the story of a disciple named Tzulu approaching Confucius to ask what he would consider the first thing to be done if he was called upon to administer a state.

"What is necessary is to rectify names," answered Confucius.

"You are wide of the mark," exclaimed the disciple in disappointment. "Why should there be such rectification?"

The reply of Confucius was

"If names be not correct, language is not in accordance with the truth of things. If language is not in accordance with the truth of things, affairs cannot be carried on to success. When affairs cannot be carried on to success,

ritual and music will not flourish. When ritual and music do not flourish, law and justice will not be proper. When law and justice are not proper, the people will be at a loss even as to the movement of hands and feet."

The realistic Chinese knew that the rectification of names, or the defining of terms, precedes the setting-up of codes of values and ethics. The absence of defined terms, of good "names" for things, spells social discord and political turmoil. If a committee of three cannot agree at the beginning upon the terms of the things they are about to discuss, they will never arrive at co-ordinated action. How much more necessary, then, for world conferences to have common terms—clear, concise definitions of the ends to be achieved—before they sit down around council tables.

For example, "freedom from want" is a very concise "name" for a future social condition. Every man and woman on the globe seeks to be free from want, so that is a universally approved "name." Any man, or group of men, who attempts to set up private or sectional interests in opposition to that general principle is anti-democratic—no matter under what label the anti-democratic action appears. There can be no confusion on that point. This is realism. "Freedom from want" is the measuring rod by which every economic proposal must stand or fall.

Yet even a just economic system is not enough. In order to put it into action, the natural resources of the world must be mobilized and the scientific genius of the world organized for co-operative effort. Transportation and communication must be correlated with the plan, and a global parliament given powers to legislate the enabling laws. All this is involved in the working out of

that very simple and universal statement of human will, "freedom from want."

Yet even freedom from want is not an absolute. It, too, is related to the other freedoms and can never be achieved without freedom of thought. Moreover, freedom of worship and freedom from fear depend upon the other freedoms. As a leader in the Nova Scotian co-operative movement once said, he could not speak to a man about his soul unless he had two hens and a shirt.

Ancient, wise, and heroic China long ago fixed upon the smallest social unit, the family, as its unit of value, not the political party. Lin Yutang has said that "the real government of China may be described as village socialism." The Chinese have worked out their generalizations from practical knowledge of social life "The people to have, the people to rule, the people to enjoy," runs one translation of the *San Min Chu I* of Sun Yat-sen, the Three Principles of China; more succinctly—nationalism, democracy, and socialism. Nor are these so far from government of the people, by the people, for the people. Yet for China these words are merely a modern "naming" of conditions long since the ideal of the people. Confucius expressed for them their belief that men with the greatest intelligence and education could handle the affairs of government most wisely because their training taught them detachment from personal and selfish ends. Reason and authority they believed the two supreme goods, but reason was more important than authority. Confucius codified for them the essentials of Right Relations, the peaceful and graceful interactions of ruler and subject, husband and wife, father and child, brother and brother, friend and friend. These right meanings might

not always be rightly interpreted. Nevertheless, China has had less of internal strife and external conflicts in the last four thousand years than has Europe in four hundred. Lao Tze expressed the doctrine of the Golden Mean—moderation in all things, the art of intelligent compromise, the seeking of common ground

Yet along with this peaceful and graceful code of ethics, China kept in reserve what Creighton Lacy in *Is China a Democracy?* calls "Reluctant Revolution." Thomas Jefferson once said that we need a revolution every twenty years. If we had them, they would be bloodless and intelligent. China knew that long, long ago. Revolution was one of the responsibilities of citizenship. The Chinese people regarded the emperor and the administration as the servants of the people, and if the emperor got "upnish" or selfish, got out of hand, so to speak, it was the duty of the people to administer a rebuke. For that reason emperors were anxious to write a book or build a canal by which to be remembered by their people. An old court axiom runs "Heaven hears as my people hear, Heaven sees as my people see." One of those delightful stories which illustrate how the Chinese people use their humor and intelligence in dealing with social crises is provided by the report that an illiterate leader who rode to power at the head of a popular revolution, slightly drunk with the taste of it, repulsed a scholar who approached him with a plan for government. "I conquered the empire on horseback, what use have I for your classical books?" he said. The scholar replied. "Sir, it is true you have conquered the empire on horseback, but can you govern it on horseback?"

So let us look for the principles of democracy wher-

ever we may find them. Let us give them names which will serve to enlighten us, rather than confuse us—names which will serve us in the common councils of mankind, as they are already beginning to convene. With the new knowledge, let us cultivate new insight and develop our latent but natural aptitudes for co-operative action and collective enjoyment of the fruits of right action. Let “the people enjoy . . .”

Says a little song of the Sung dynasty.

In the beginning
Man's nature is good.
Near to one another by nature
Men are set apart by practice.
Without teaching
Nature degenerates

FUNDAMENTAL CONCEPTS OF SCIENTIFIC HUMANISM

Now that the reader has been introduced to the subject of scientific humanism, there is need for a more detailed statement of the meaning and social program of scientific humanism—a definition of the terms in its cultural applications. The proper place for a complete definition is at the end rather than at the beginning of a volume such as this; but in order to get under way, and merely as a preliminary formulation, we present the simple suggestion that scientific humanism is a contemporary social movement interested in bringing science and human society together in a symbiotic relation, that is, one that is mutually beneficial.

In the light of this approach, our problem becomes that of interpreting the achievements of science and correlating them with the functions of society so that these mutually advantageous interests are enhanced. In order to simplify our exposition of the fundamental ideas of scientific humanism, we shall organize our discussion of the fundamental concepts of this intellectual-social synthesis around four main centers of crystallization (so to speak) as follows. (1) the theory of *emergent evolution*; (2) the notion of the *spiral action of time*; (3) the concept of *globalism*; and (4) the idea of *total living*. Let us now examine each of these ideas in more detail.

I. THE THEORY OF EMERGENT EVOLUTION

The first essential of an adequate theory of morals and a hopeful program of social reform is that it be based on a sound theory of nature, physical, biological, and mental. This much is obvious.

Now it goes without saying that humanism is naturalistic—it allows no place for miracles, for supernaturalism, for special providences and the like. It believes that man is a product of evolution and thus rejects the special creation theory of the origin of living forms which arose out of the literalistic interpretation of the account in Genesis. But it must also be noted that the emergent evolutionist is no "mechanist"; he is no advocate of a dreary determinism as a by-product of an ancient and obsolete materialism.

We believe that man, as a product of biological evolution, is now, at long last, "on his own"—his future is his to make or mar as his human intelligence enables him to solve his problems and recreate his environment. The two best elements of our Western cultural achievements (of Europe and the Americas) are (a) a belief in the value of the individual—our democratic individualism, as we may call it—and (b) a confidence in the value of scientific method as the sole means of procedure for discovering and validating our human truths. To reject either of these is to relinquish the finest constituents of our cultural heritage. To mechanize the individual or to renounce science is to betray our past and lose the future.

We cannot here enter into a complete exposition of the theory of emergent evolution. It is sufficient for our

present purposes to point out that what "emerges" in the evolutionary advance are new properties and forms of behavior, and that in this sense nature is creative. Since the properties and behavior of each new level of nature are *not* the properties and behavior of the constituent parts, they are a "law unto themselves" and in that sense "free," as E. G. Spauling once pointed out.

In accordance with the principle that to be free is to be determined (in part) by one's own nature, freedom can exist on any level of organization, and this is entirely in harmony with "law" and "determination" at this higher level. Accordingly, on the human level, it is up to man to direct (or redirect) the trends of nature and society into channels in consonance with humanity's best (synergic) aspirations. That is what scientific humanism is committed to taming nature and society for further human adventure and welfare.

II. THE SPIRAL ACTION OF TIME

It should always be borne in mind that while scientific humanism is sometimes described as "revolutionary," this viewpoint nevertheless recognizes the need for cultural continuity in our restless and ever-changing society. What we humans require is an integration of the past with the future through the developing present. This "time synthesis," as Mary Everest Boole names it, or "time binding," to use Alfred Korzybski's term, accepts the principle that we cannot make progress merely by destroying old beliefs, practices, and institutions. We must fuse the superior elements of the past with the new ideas and techniques of contemporary inventive skill. As we

see it, the next big step in the direction of the integration of global culture will consist in harmonizing the finest elements of Western culture (already mentioned) with the best flowering of Oriental cultures—the philosophy and religion of India and China—to produce a universal civilization for all mankind.

In dealing with the spiral action of time (the corkscrew spiral), we find that one big difficulty with progressive cultural integration comes from the necessity for overcoming what historians and sociologists call the “cultural lag.” This phenomenon we now consider.

Everyone is familiar with the phenomenon in the physical world known as *inertia*. In general, this is the tendency of a thing to continue to do what it has been doing, so that if the thing has been at rest it requires some “time” and “force” to set it in motion, or if it has been in motion it requires “time” and the application of an opposing “force” to bring it to rest.

It would not be at all strange if this principle, universal in its application in physical nature and in physiological processes, also held in the intellectual and cultural sphere. And our expectations are fulfilled, for it is known that in social processes there is a “cultural lag” analogous to inertia (time lag) in physical processes. The human mind exhibits inertia, for if you want to set the mind of man in action you must apply sufficient energy to overcome intellectual resistance to new ideas. It is for this reason that the application in society of theoretical ideas and inventions discovered by research workers does not bear practical fruits until some time after their inception. But while the public lives by one set of beliefs and practices, researchers are laboring in their sanctuaries to create new |

patterns, destined eventually to replace the old and out-worn.

In spite of the many "lags" displayed by our times, there has been developed throughout the last century a creativeness which is unique in human history. Our faults have not always been the faults of mental sluggishness in accepting and applying new ideas, but the faults of wrongly directed activity in our fitful age. Every field of human endeavor has been prolifically productive of experiments and hypotheses. Our chief need now is for the type of mind that can correlate, synthesize, and organize our vast accumulations of ideas, enterprises, plans, and hopes. The thing we call scientific humanism is in essence the attempt to do just that. Wherever a scientific humanist is at work, there you will find an attempt to simplify, to apply knowledge, and to lift the common level of thought, aspiration, and effort.

It has been estimated that 70 per cent of the responsibility for the winning of the war rests upon the home front, the civilian workers. Perhaps the same estimate would apply to the responsibility for the winning of the peace. Those who will administer the government of the long armistice required for the rebuilding of our world must rely for their inspiration and for their authority upon the home front. So in the shadow of the war we find a great movement under way for the creation of patterns for the post-war world. Much has already been done, much yet awaits its pledged disciples and executants; new and significant figures are becoming known to us. We recognize some of them as the men and women who are gathering together the basic building materials from the learning of the past and present—sorting, dis-

carding, synthesizing, recreating—and out of this labor in which both head and heart participate, they are producing a philosophy to embody the vision and the will of modern man, to make possible the Four Freedoms, and to incarnate the idealism of the Atlantic Charter.

Of course, after the fundamental synthesis of ideas has been attained, it is necessary to translate the thinking of the scientific humanists into terms of personal attitudes. We cannot "step down" such formulations until the researchers have completed their arduous excursions into the realm of abstract ideas, and in a sense their work is never finished anyway, so that what we really need is the time-binders who can communicate, organize, test, and report back from their field excursions. The gap between thought and action will become dangerously wide if we do not see to it that the creative ideas of our day are made available widely and immediately.

Lest the reader get the idea that scientific humanism is regarded as the abstract product of the intellectual, isolated from the world of practical affairs, we stress the social context and motivations of all scientific endeavors. To exhibit the importance of this, let us refer to the views of one eminent physicist, who should know what he is talking about.

Irwin Schrodinger, the Nobel Prize winner in physics, some years ago published a book called *Science and the Human Temperament*. He is the formulator of the Schrödinger wave equation, the basis of a new quantum mechanics. We may suppose that he is in a position to speak for science. Schrodinger quotes Zola as saying that a work of art is nature seen through a temperament. He then asks whether science is not also nature seen through

a temperament? Obviously such sciences as history, sociology, and psychology are colored by the individual temperament of the researcher, as well as by the collective temperament which we call the society of our time.

For example, many histories and biographies of the last few decades have been written from what we call ideological points of view. Conrad Noel's *Life of Jesus* is an example. An outstanding case in point of the adjustment of scientific data to party theory is, of course, Hitler's attempts to nazify physics, mathematics, biology, and so on. We have usually regarded the exact sciences as being free from the effects of human temperament. We thought of them as objective studies, more dependent upon method and laboratory equipment than on human values. But Schrodinger does not share that view. He recalls the many thousands of experiments that have been made in scientific fields, and points to the many more thousands of experiments that might have been made but were never attempted. He points out that the selection of experiments rests largely on human temperament first, personal inclination of the researcher, his likes and dislikes of subjects, and so on; and secondly, the social temperament which controls laboratory facilities, endowments, the time made available for research in the particular society in which the researcher finds himself, and the like. These things depend on the social enlightenment, or the character, of the society.

We see, therefore, that the state of science is a direct reflection of the social temperament. Think for a moment of the relative discrepancies of the state of scientific research in China, India, Russia, Germany, and the West-

ern democracies. The direction of research and its impetus rest upon human factors. Research in wartime and in peace moves in different directions, due to the urgencies of human events. So ultimately the direction, volume, and quality of scientific research are involved in the inner compulsions and vision of human society.

Schrodinger feels that if the discovery of scientific laws depends upon the deeply human powers of imagination and intuition, the results of these discoveries cannot be divorced from their human framework, and they can never be regarded as outside human uses, or as existing in their own right apart from social values. Yet some intellectuals would have us believe that the exact sciences are neither dependent upon nor related to human society. The new attitude knows of nothing outside the life of the whole man. Scientific humanism minimizes the discrepancy between the discovery of a truth and its functional application in the daily life of society. This is time-synthesis. The heart of humanism is the determination to regard truth as useful, to put it to work here and now, above all things not to embalm it in specialized libraries, to be worked over by other generations of scientists and philosophers in monastic seclusion, divorced from social settings. So far as is possible, truth should be embodied in the social structure of the age in which it is established. To our discredit in this day, great accumulations of knowledge are filed away in reports and theses, unused, because they involve the discarding of some of our comfortable, old privileges and prejudices. Scientific humanism labors to break down the sound-proof walls which now stand between the laboratory and the legislature.

III GLOBAL THINKING

In the world after the war, technology will occupy an important place. But, as already noted, technology (the "machine") can be a dehumanizing influence or a humanizing influence, depending on how the machine functions in society. That is why we must learn to humanize science and socialize our technologies.

Science and technology are creating a new kind of unity in our world, a planetary unity of global technologies. This unification calls for the development of a parallel political, economic, and cultural unity of mankind. The future will be an air-age era, a period in which the airplane, radio, and television will bring people close together. But whether the peoples of the world will be better off for that togetherness depends upon whether we can utilize our air-age technologies for the improvement of human relations. The increasing mastery of space and time will either result in a world-wide enslavement of the human race by the exploiters of men, or our air-age technologies will be used by free men everywhere to build their own planetary civilization.

This means, therefore, that we must change our frame of reference, or enlarge the perspectives of our thinking. We need "global thinking" in all fields. Our problems are world-wide, and our techniques for dealing with them must be equally broad in comprehension and execution. The life of the future will not be an easy one, as anyone can foresee.

An easy life is a dull life. This is not the aim of scientific humanism. Man is man only when his powers and abilities are extended to their utmost. The man com-

pletely employed, physically, emotionally, mentally, and spiritually, is the dynamic man. He then begins to function like a "total man." The future society will make great demands on individuals, it will call forth effort, co-operativeness in labor, and discipline in the building of the new world structure. The years that lie ahead will constitute the most absorbing drama of all time, in which all the world will indeed become a stage, and all the men and women really players.

A philosophy represents what a man thinks about things. Each age has a prevailing philosophy. Every man has a philosophy of some sort. What we think about the world today, and about the Atlantic Charter and what it stands for is our contemporary philosophy. Scientific humanism is a bridge between the Atlantic Charter and the prairie village where dynamic democracy and the Four Freedoms go into action.

This is a global war, the peace that follows will see the creation of a global society. That statement is true whether we win or lose the war and/or the peace. The future is global—global slavery or global freedom. When this war ends, we do not face a compromise with Russian communism, British imperialism, American industrialism, Chinese socialism, or Indian nationalism. What we must have in the future is a vision so wide and so compelling that it envelops all of these and offers something greater than any or all of them. The future should not be a matter of *this* or *that*. It should be an age of synthesis, a federation of peoples, a world of planetary good manners in basic public affairs. For assurance of this, we need only read the statements of United Nations statesmen, or the various reports of the International Labor Organization, which ex-

press what they do because this is what the peoples of the United Nations want.

In this sense, Planetism is the religious spirit of scientific humanism. It is the only "religion" powerful enough to displace the regional and class religion of fascism and the regional and class religion of communism, which have been the two most powerful religious forces in recent decades. Man and his destiny constitute the only thing in the world today big enough to dominate the total human imagination. In the united effort to understand man, his source and his goal, we may unify a collective ideal and incarnate it in the "brotherhood of man." Man has made many gods, all of them regional, racial, and class conscious. Yet back of his intelligence was sometimes an idea that there was an As-Yet-Unknown God. But how difficult it was for each man to overcome the belief that God was made in his image! So we have had black gods and white gods, brown gods and yellow gods, because human imagination was incapable of overleaping all its traditions and conceiving of an Unknown God great enough for all. But the energy of evolution thunders in human consciousness in these heroic days, and as we grow through suffering and tension and trial, so also grows the will to the new society.

Planetism involves the federal principle, under which units will maintain their identity (relative, not absolute) within a co-operative whole. The great experiments in federation have been carried out by the nations on the side of the United Nations—the British Commonwealth of Nations, the United States, the Union of Soviet Socialist Republics are all federations. Each has experience in the collective living of peoples of many creeds, tongues,

races, and classes. None of the Axis nations is skilled in the application of the principle of federation. They are worshippers of tribal deities, Hitler, Mussolini, and Hirohito are tribal gods. Global thinking is the language of the future; but Axis global rule would not be thinking—it would be tribal consciousness on a planetary scale.

Why do we believe that after the war we shall have a planetary society, a federation of friendly cultures? Because we believe that most people are realizing that unless we have the courage and the vision *now* to imagine this new society, we shall all go down to a defeat and slavery such as the world has never known. Unless we begin to plan now for the world of free men, the spiritual light embodied in humanity will flicker out and leave the world in darkness and despair. If, however, we have the courage, the endurance, and the imagination, we can, in the very process of winning the war, build a new world through the genius of mankind. The blazing imagination of free people—even when they suffer and die in fascist-conquered countries—is something the Gestapo cannot quench. No panzer division can roll over it. Hitler has destroyed the imagination of his own people, but it was Nazi education that snuffed the spark. Our greatest weapon today in rebuilding, not only the “fallen” nations but Germany as well, is imagination. That is why in a planetary society, while our collective needs must be protected, our need for the valuational factor of personality must also be respected. Mobs do not imagine or create. Imagination is a faculty of an individual. Here scientific humanism will play its part through its fundamental belief in the individual man—what we have called “democratic individualism.”

IV. TOTAL LIVING VERSUS FRAGMENTATION

We have already made the point that we must overcome the lag that exists between our ideas and our practices; that is, we must align our ideas and our times into one coherent whole. As Korzybski has pointed out, when the gap between scientific discoveries and social policies becomes too great, revolutions occur and balance is achieved by violence. We can prevent this violence (wars, revolutions, and so on) by preventing the lag.

One great cause for the discrepancies in the rates of social change in our society comes out of a dualism permeating our social structure. This dualism reflects a specialization of interest and a fragmentation of approach which indicates that our society is atomistic rather than organismic in structure. The dualism we refer to, as much responsible for our troubles as anything else, is the opposition between *science* and *scientific method* on the one hand, and the field of *human values* on the other. So important does this matter seem to scientific humanism that it is necessary to develop the consequences of this dualism.

Here are the two fields, separated in terms of objectives, as a commonly accepted viewpoint insists that they must be.

1. *Science and scientific method:* Scientific method, as ordinarily presented, is objective, unemotional, it is an "intellectual" activity. The business of the scientist is to discover truth, to understand. It is not the business of the scientist to engage in social reform, or to preach. For example, it is the business of the chemist to discover the

formula of a chemical substance—like picric acid—and whether this knowledge is then used to make TNT and blow other people to bits, or to make medicinal substances, is not the concern of the chemist (as a scientist).

2. *Field of human values:* This is the field of religion, ethics, politics, law—the field of social reform and moralizing. This field is more closely connected with man's emotional life. According to the traditional view, the field of values is closed to science, for example, whether it is desirable to build a bridge, or visit the planet Mars, or construct an airplane is not for science to decide—it is a matter of one's philosophy (values). But if I decide to go to Mars, I can then go to the physicist and chemist, and find out how to construct the rocket or airplane (or whatnot). In brief, science provides the *means* but cannot determine the *ends*. Even Bertrand Russell, who should know better, has said that "the sphere of values lies outside science"

The scientific humanist, as might be anticipated, finds this dualism unacceptable. In the first place, he asserts, this view is unsound psychologically. The opposition between *facts* and *values* is based on an obsolete psychological theory—the opposition of "reason" and "emotion" is a remnant of an old faulty psychology which we inherited from the Greeks. Today we recognize that the scientist is animated by emotional drives, even in his pure research. "Truth," for example, is certainly a "value"—the object of a desire—no less than the desire for fame or wealth.

In the second place, the humanist insists, this dualism is harmful socially. This dualism of two worlds makes it possible for the scientist to ignore political and economic

problems. In the past, physicists and chemists seemed to work in a social vacuum: they could carry on their research regardless of the political power running the government. But in more recent times, we have seen something of the streamlined brutality of the Nazi-Fascist "science," and this has taught us all a lesson—the great danger of the scientist being indifferent to the social uses to which his discoveries have been put.

To overcome this dualism of science and morals, facts and values, reason and emotion, the scientific humanist proposes some new obligations for science, as follows:

(a) In the future the scientist must be more interested in the social implications of his knowledge, the consequences of his scientific discoveries for politics, religion, economics, and so on, and (b) the scientist must be prepared to assume a greater responsibility for controlling the impact of science on society. In the past the situation was summed up in the statement "science has the knowledge but not the power, the politicians have the power but not the knowledge." In the future, this condition must not be tolerated, and in remedying the situation we must relinquish neither our science nor our humanity. This can best be done if we recognize that *scientific method not only gives us the method for society but also determines the ends of that society*.

The point of view we are here defending has been well stated by John Dewey in the following confession of faith ¹

¹ Quoted from an article in *Science*, Vol. 97, 1943, p. 171. Much of this statement was included in Dewey's address at the Boston meeting of the A A A S in 1909.

One of the only two articles that remain in my creed of life is that the future of our civilization depends upon the widening spread and deepening hold of the scientific habit of mind, and that the problem of problems in our education is therefore to discover how to mature and make effective this scientific habit. Mankind so far has been ruled by things and by words, and not by thought, for till the last few moments of history, humanity has not been in possession of the conditions of secure and effective thinking . . .

Scientific method is not just a method which it has been found profitable to pursue in this or that abstruse subject for purely technical reasons. It represents the only method of thinking that has proved fruitful in any subject—that is what we mean when we call it scientific.

If ever we are to be governed by intelligence, not by things and by words, science must have something to say about what we do, and not merely about how we may do it most easily and economically.

That is a fine statement. But as one might expect, on this matter of realizing that scientific method provides not only the *method* of democracy, but the *ends* of democracy as well, Dewey was anticipated by his predecessor, Charles S. Peirce. Peirce's conception of logic—the theory of deliberate, self-controlled thinking—makes it a branch of ethics. According to this view, man is as much responsible for his thinking as for his behavior (indeed, for a pragmatist, thinking *is* behavior), therefore, when Peirce divides arguments (reasoning) into *good* and *bad*, he really means it! Both reasoning and conduct must be deliberate (controlled) and must be made to conform to ideals (morals).

To be sure, while logical norms correspond to "moral laws," Peirce does recognize that there is a difference between logical and other moral conduct. For example,

the element of will does not enter into logic to the same degree that it does in ethics. Nevertheless, the righteous man in both cases exercises restraints. Peirce's theory that good reasoning and good morals are closely connected is carried so far that he is committed to the conclusion that the man who hopes to do much in *science* must be moral.²

These views of Peirce and Dewey fit in well with the main emphasis of scientific humanism. In the first place, they reinforce our conviction that the promise of the future, the hope for a better world, rests upon the previously emphasized statement that we fuse and harmonize our science with our humanity, and in the second place, the Peirce-Dewey view adds plausibility to the humanist's criticism of psychological elementalism (separation of faculties) as well as humanism's protest against educational atomism ("ethics" versus "logic" and so on). Like Dewey's progressive educational theories, scientific humanism finds much to criticize in our conventional educational procedures. Our schools are sterile because they do not stimulate the sense of wonder and curiosity.

It is not enough, however, merely to kindle the steady flame of reverence through a renascence of wonder and curiosity. The process of unifying personality through a fusion of reason and feeling (the head-heart synthesis) must be coupled with the development of a greater responsiveness to the global framework of our human existence. At the present time (to change the metaphor), there still lingers in our tribal society a great tendency

²For a brief statement of "Peirce's Conception of Logic as a Normative Science," see Arthur W. Burk's paper on the subject in the *Philosophical Review*, March, 1943, pp. 187-193.

to let down the flaps of our tepees and find satisfaction in the outworn folkways of the ancient trading posts. Perhaps the fear of catching some new infection of enthusiasm, after so many disappointments, will constrain us to be content with our primitive customs, rituals, and institutions. What is worse, some of our social isolationists will desire to live alone and smoke the pipe of peace only with those nearby and of like tribal sentiments. Inevitably the occasional excursion to bury the hatchet—in another's skull—must be resorted to in order to relieve the monotony of the tent-like existence. Such is what man has been and still is, at his worst.

But as civilized human beings, we must eventually feel a revulsion against the ugliness of the atavistic return to primitivism. Humanity at its best demands something superior to a recrudescence of ancient tribalism. As creatures of the earth, who have learned to live in the sky and create the air-age global politics, we are increasingly sensitive to the human overtones of mankind the world round. Let us hear the emerging melody of all the peoples of the earth, who can now be satisfied only to the extent that they share in the solution of their common problems, global in scope and perplexity, but easy of solution when good will is integrated with social intelligence to create a social structure expressing the planetary wisdom of the human race.

V. THE QUICKENING OF HUMANISM

We need to keep in mind that scientific humanism is permeative, not competitive. The existing nucleus of scientific humanists is not so much concerned with setting

up another organization as it is with integrating the humanist tendencies already in existence. Its function is cohesive. Its chief technique is synthesis. Its all-important instrument is education.

This strategy places a very great burden—even when willingly accepted—upon educational institutions which society has developed as vehicles for the promulgation of the best in cultural achievements so far attained. It means that our educational systems, formal and informal, from kindergarten to schools of advanced studies, academic and vocational, institutional and non-institutional (adult education, rural education, and so on), must be imbued not merely with the necessity for *transmitting* surviving cultural patterns, but in *creating* new ones. They must be conscious of a function as the birthing place of new patterns of living.

Actually this work is already under way in various fields of education, the yeast of a new conception of human values is at work. The service which scientific humanism can offer is the philosophical interpretation of the conflict arising spontaneously in the collective human mind between the old patterns and the new ones, between the *how* and the *why* of social change. Scientific humanism takes the accumulation of human thought and action *as it is today* and makes plain the points of contact, suggests solutions for the points of difference. Its principles can be brought to bear anywhere in assisting the workers in any field or project to discover and to understand where the *special* project belongs in the larger picture of universal change. It brings to bear upon the workers for world unity the sense of relationship, it finds

the points of relatedness which serve to fuse into an intelligible whole the innumerable sincere and too-often isolated plans for special projects. The special power of scientific humanism is its ability to test the essential validity of any proposal or project by its code of principles—and so to assist in the promotion of any movement which is humanistically sound or the isolation of any movement which is ill-advised, misconceived, or deliberately subversive. In a word, scientific humanism is consultative and advisory. The acquisition of the philosophy of scientific humanism by any man or woman, in any field of human activity, reinforces that individual with the means of measuring his own activity or the activities of his associates by a universal measuring rod of Man. It provides humanity everywhere with a common denominator.

The quickening of humanism has been proceeding for some years past. The bibliography of humanism has swelled to great proportions in the last decade alone. Educationists especially have been uneasy for a long time over the condition of the humanities in higher educational fields. The vitality of "business" for several generations has been so markedly superior to the vitality of education that, like the camel in the tent, business interests in technical education have been persistently usurping the place of the humanities. Applied science, economics, industrial research, mechanical engineering, accounting, and many similar special studies crowded the humanities to the walls and into the dark corners of semi-obscurity. Fortunately before the situation became disastrous a few vigorous younger voices began a protest. They demanded that the humanities themselves become the subject of

research, that the scientific method be applied to their problems, and a fair balance be struck.

Sir William Osler was one of the great humanists who worked through British, American, and Canadian institutions for a revival of the humanities in scientific life. With his passionate devotion to every sentient man, he transformed the attitude of the physician from that of complete detachment from the *person* of the patient, from his preoccupation with the *ailment* of the patient, to an attitude of the scientific humanist serving his fellow man. Osler, by his personal example, his faith in the spirit of man, and his delight in all the creative work of man, inspired generations of students to new codes of values.

Then, in 1927, there appeared a wise and measured protest against the current trends in the depreciation of man, in *Towards the Open*, by the biologist, Henry Chester Tracy. With his accent on *attention* as the first step to the enrichment of life, he pleaded for space, privacy, and leisure for every individual in his search for the good life. He wrote as a scientist and a humanist, and the subtitle of his book was "An Introduction to Scientific Humanism." It appeared two years before the crash of 1929. Few had the sensitive ear to hear its plea for sanity and insight. Following this, we had a series of anxious books on the Burden of Humanism, Humanism and Science, Humanism and Imagination, Christian Humanism, True Humanism, Humanism and Theism, Humanism and the Education of the Future, the Meaning of the Humanities, The Revival of the Humanities, and so on and so on. The American Council of Learned Societies made a survey of the great institutions of higher learning all over America and held conferences with facul-

ties, discussing the channelizing of American youth into the professions which served industry and away from the professions which preserved our sanity and humanity. It pointed out to such faculties the necessity for humanistic methods to be applied within the faculties themselves in planning for cohesion among teachers and departmentalized knowledge, which was to be based on an understanding *among themselves* of the relatedness and the values of specialized studies and their basic humanistic or anti-humanistic qualities. Then came men like John Herman Randall, who was among the first to realize that scientific humanism involved the world view, and he tried to outline the problems and opportunities of *A World Community*. David Lindsay Watson from within the citadel of science discovered that *Scientists Are Human*, and then worked out his thesis that science was not an absolute, but entirely dependent upon the human units who served the search for truth and their qualities as human beings.

There were many more who wrestled with the spirit of inquiry to the point of articulating their thoughts and convictions in various kinds of books. One can be very sure that for every man or woman who reached the point of writing a book out of his intellectual travail, there were many more who moved out into the open in their own minds but said nothing about it in print. Scientific humanism is not a philosophical sport. It arises naturally out of the strivings of contemporary thinkers to understand the meaning of the ferment in human life. It is philosophy's contribution to the common effort to discover the common goal.

CHAPTER IV

MORE ABOUT THE CONCEPTS OF SCIENTIFIC HUMANISM

Knowledge and Wisdom, far from being one,
Have oftentimes no connection Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own
Knowledge is proud that he's learned so much,
Wisdom is humble that he knows no more

—COWPER

1. Scientific humanism aims at the synthesis of contemporary knowledge. It is a conscious attempt to restore philosophy to its rightful status as "the love of wisdom." Our bodies of knowledge consist of multitudes of facts. Wisdom is the insight into the relatedness of facts to each other and to central principles underlying man's conception of his place and function in the universe.

It is *humanism* in that it regards human society as planetary in scope, universal needs and activities as common factors throughout the entire planetary society, all races as contributing to the evolutionary trends of society, all cultures as expressions of humanity under varying local conditions; all natural resources of the planet, including man's inventions and discoveries, as a common heritage of the race.

It is *scientific* in the sense that it admits the necessity for the objective examination of all types of human re-

sponses, excluding nothing that is intelligible or potentially significant, it holds that scientific method should be the basis of wise government.

2. Scientific humanism believes that all truth emerges from an intelligent and responsive common source, that the interrelatedness of natural laws already formulated by man into a transmissible body of knowledge proves man's access to that common source—his ability to extract intelligible fragments and use them as building bricks in an analogous unity of human thought that is constantly expanding into a more and more adequate reflection of the body of wisdom which already operates throughout the universe.

3. Scientific humanism advocates the application of truth to the time in which it is discovered, according to the needs of the times, unhindered by any established traditions or vested interests. It holds that the body of truth manifested in human knowledge is a cumulative heritage, the common property of the race, to be held in trust for the use and service of all men everywhere; that the incident of "discovery" and the formulation of a law or principle does not entitle the researcher to suppress or to monopolize that truth or let it pass out of his control by sale to any other private interest; that no man "invents" any truth but only discovers it; that he does so as a result of a culture and an education which is based on the cumulative effects of human efforts and the social struggle to provide the transmission of knowledge to an ever widening group of human beings. The researcher should therefore be recognized as an agent of emergent evolution.

4. Scientific humanism bases its conception of man's

inherent common rights in the racial investment of knowledge and wisdom, on the contemporary conception of the universe as a dynamic, not a static, organism. Nothing in the universe should be thought of as static, for to do so is to infringe upon natural laws, physical, biological, and psychological. The freedom of man parallels his capacity to live in harmony with the laws of behavior of a dynamic universe. Anything that interferes with the natural laws which govern his whole being—physical, emotional, mental, and spiritual—creates conditions which appear as disease, unhappiness, insecurity, and hopelessness.

5. Scientific humanism believes that man's natural capacity for self-improvement under conditions of freedom is the basis of his claim to dignity as a human being, since he is the only organism in the tangible world which can become voluntarily self-evolving. Accordingly, man's efforts at self-evolution should be respected by his fellow men. Man is motivated by a basic desire to share the results of his self-evolution, and has evolved a language by which to accumulate and disseminate the results of his efforts. This language is also evolving, and man has of late developed a new discipline of semantics to ensure the flexibility of language in expressing the complex and dynamic transitions that are being made in his modes of thought and social reconstruction. Scientific humanism regards semantics as one of its tools of research and expression.

6. Man's natural, teleological impulse seems to indicate a supra-personal element in man which is commonly designated as "spirit." When this spiritual element in man is most in evidence, the individual displays unusual

powers of imagination, mental penetration, a sense of order and creativity, and a consciousness of relativity in the affairs of the planetary existence of which he is a part. In short, a human being most endowed with the intangible of spirit is what we call a genius. The infrequent appearances of these genius-types throughout history have been the signals for the irruption into human consciousness of fresh stores of truth to fecundate the centuries that follow. The basic characteristics of these eruptions of wisdom-knowledge throughout the ages and over the spaces of the planet have been their cumulative values, creating as time passes a body of coherent knowledge which can be universally applied and transmitted. It is dynamic in the sense that from any part of this body of knowledge, new values may emerge at any time and in any place, in the work of any man or woman of any race, color, tongue, or creed.

7. Scientific humanism recognizes that politics and economics, education and religion, are all man-made codes and are as subject to the processes of evolution as man himself. Man's creations are neither final nor sacrosanct, they must change with changing man, and the rate of change in human society should be correlated with the rate of change in human consciousness. Expanding consciousness is the motivating force of social change. When institutions and codes of ethics resist change and become incapable of adjustment, then occur periods of human maladjustment and suffering. Change is inescapable as man evolves, and men themselves should consciously decide how much change shall come about and in what manner, whether with the natural ease of evolutionary development or by catastrophic upheavals. There is no

supernatural, sadistic being imposing unearned misery upon man, nor any supernatural, sentimental being conferring unearned faculties or skills or rewards upon his favorites among men. The basic laws of the universe, so far as we have learned them, are coherence, intelligibility, order, and interdependence. Scientific humanism believes that man-made society everywhere in the world should be planned on the basis of providing the environmental conditions in which efforts at self-evolution are

- (a) recognized as the purpose of life;
- (b) evoked and encouraged by social conditions, economic and cultural,
- (c) rewarded by the approval and respect of society.

Emergent evolution is a law which operates not only in the physical world but also in the world of consciousness with equal significance.

8 Scientific humanism admits the possibility, as a working hypothesis, that the spiritual element in man may be a non-material (but natural) influence in consciousness, not necessarily co-existent with the physical body and possibly having a larger cycle of evolution than the physical personality. If that be so, man's self-evolution might involve his repeated emergence from an intangible state of being into tangible physical existence with corresponding withdrawals (which we call birth and death), so that the individual status would be the result of his success or failure at self-evolution. This hypothesis, imbedded in the philosophy and religious theory of many ages, would then be a clue to the apparent inequalities of human beings and a possible explanation of the so-called genius-type—an individual who by self-disciplines learns to penetrate into states of consciousness unknown to his

contemporaries, to pluck out the raw materials of advancing human wisdom which can be translated into language intelligible to his fellows.

9. Scientific humanism believes that society should be so constituted as to incur the least possible interference with the dissemination of truth in any of its forms, whether in physics, biology, the arts, economics, or political science, or any other field of research, and that teachers should seek the lowest levels of receptivity as well as the highest. Society is a structure which makes possible this penetration of all parts by the flow of knowledge from all sources, ministering to the humblest need for enlightenment, health, and freedom.

10. Keeping open the channels from the sources of inspiration and vision to the commonest level of need is the function of religion. Scientific humanism reverences the sources of inspiration, the As-Yet-Unknown, as Mary Everest Boole termed it, and respects man's natural faculties for translating the Unknown into the Known by faith and sustained effort. Those who have advanced farthest on the road of self-evolution, who have approximated most completely the consciousness of the Cosmic Continuum ("Cosmic Mind") believe that Influence (field) to be beneficent and intelligent ("wholistic"), and the purposeful striving of human life to be rational and hopeful. These are the ones who have displayed the deepest faith both in man and in nature, and in the thread of continuity running through history and inherent in the "evolution of orientations."

11. Scientific humanism believes that man's intelligence can solve man's problems when it is set free to invent new methods of thought and action. As candles

could not be adapted to the use of illuminating gas, and as gas fittings could not operate to illumine our homes with electricity, so the old laws of the logic of "identity" and so on are inadequate for the new forms of consciousness in a world known to be based upon principles of relativity. The traditional and time-honored "law of identity" became, in our day, "egotism," "rugged individualism," "nationalism," "imperialism," "class hatred," and "racialism." Consciousness of group destiny, of planetism, of field theories makes new modes of reasoning possible.

12. Scientific humanism regards the universe as still in the process of creation and man as an evolving creature only part way along the road to some unforeseen goal, and man's present phase of development as an aspect of the emergence of new psychological faculties with accompanying biological and social adjustments.

The attitude that would deny all validity to religious and psychic experiences is as inflexible as the theological viewpoint that would deny the validity of scientific knowledge, most especially since the real values reside neither in "revealed" theology nor in the experimental data of the laboratory, but in the spirit of search which prompts the attempt at acquiring knowledge through adventure and discipline. The searcher is the evolving man. The man who accepts other people's results without ever rethinking them for himself is not evolving.

Much of our difficulty comes from the tyranny of words. The scientific humanist uses diffidently such words as "God," "religion," and similar terms, because each seems to require so much explanation, each time it is used. Such words have barnacles clinging to them. To

the humanist "religion" is an experience, not a theology. In this sense, anyone who is normal enough to feel and think can have "the religious spirit." Men should always be seekers of means of experiencing the As-Yet-Unknown.

13 Historically man's religion has had two objectives: first to create integration of personality and conviction of purpose in the inner life. In achieving this function, religions from time to time have been successful. Many great individuals have, through a religious sense, contributed to human enlightenment out of all proportion to their statistical significance in exemplifying the life of Total Man. The second function of religion has been to unify and harmonize humanity as a whole. Great spiritual teachers have some vision of a universal order in which common principles of justice, fraternity, and so on would prevail. In making this vision socially objective, religions have so far failed. Nevertheless, the religious spirit has, through its tireless incarnation of ideals, pushed the spearhead of man's sense of dignity and power to create ever onward into the Unknown, until today man's self-consciousness provides us with the physical means to a world society, a planetary family, by communication, transportation, mass production, printing, motion pictures, and many other products of human inventiveness—with even greater developments just ahead.

In the past, religion has been chiefly concerned with the individual and his personal destiny, even though inherent in the religious sources of both East and West was the ideal of community destiny. Long before the Aristotelian tradition established the logical and metaphysical ideas that culminated in "rugged individualism,"

the Vow of the Bodhisattvas, or World Disciples, declared:

Never will I seek or receive *individual* salvation,
Never will I enter into final peace *alone*,
But forever and everywhere will I live and strive for the
redemption of every creature throughout the world

This was inherent in the teachings of Jesus who said: "Go ye into all the world with the good news . . . for I am with you always, even unto the end of the world." Both East and West have for these long centuries possessed the basic teachings for a constantly evolving religious spirit. But today's spiritual revolution, in order to overcome the inertia of modern times, must be inspired by the contemporary scientific understanding of nature as a planetary organism in which we live and move and have our being.

14. Man, as an intelligent and evolving creature, exists in a narrow borderline between the Known and the Unknown. To maintain his normalcy and his capacity for evolutionary fulfilment, he must remain in and guard this borderline of balance. If he retreats into the Known, he becomes a materialist, prey to existent things—laws, possessions, theories, and so on. If, on the other hand, he underestimates the Known, and throws himself without discrimination into the As-Yet-Unknown, he becomes an uncreative mystic or psychic, because he lacks the materials with which to give intelligent form to his experiences and ideas.

Man's place is on the borderline, and his function is to push the borderline steadily into the infinite reaches of the As-Yet-Unknown, using the Known as stepping-

stones and tools of adventure. But no man can push far into the Unknown alone. As in military parlance, spearheads can be nipped off, so individuals, too far in advance of their fellows, can be nipped off and lost. The borderline must be an orderly advance. The pioneers among men must carry their community with them.

This does not mean that the gadgets of civilization must be evenly distributed over the face of the earth. It does mean that men must provide that the essence of their knowledge is duly made available to all, according to their needs and capacity. It means the creation of a society which provides wisely for all types of men, not an ideology which makes all men over into one pattern, and that, the pattern of the industrialized man. We have too many laggards, but industrializing the Solomon Islands will not remedy our shortcomings. Electric refrigerators, airplanes, and radio are not the sum-total of our human knowledge. What we must teach is that man has reached the point in evolution where he can put natural laws to work to produce heat and cold at will, to offset the laws of gravitation, and to span the earth with his voice. Where we have failed to explain what our achievements *mean*, we have left pockets of unevolved mentality behind our lines, as in Germany, where a few do the thinking for the many. And these laggards have become guerrilla bands in our rear, undoing our work of conquest. But with our capacity for transportation and communication, we can no longer find an excuse for evading our responsibility for "straightening our lines" by means of planetism.

Primitive men sensed the truth of the necessity for the interlacing of the Known and the Unknown in their

worship of the creative *act* and its organs. Modern man worships the created *thing*—his learning, his ideologies, his mass production, his machines. The new humanity will elevate to its place of reverence the creative *process* as the spirit of evolution. That man may appreciate the *process of creation*, he must cultivate his curiosity, his sense of wonder, his reverence for the Unknown.

Our Western educational systems have become for the most part sterile because they have deprived youth of curiosity and a sense of wonder. Our advances in science and other fields of study have been achieved by men and women who first of all had to unshackle themselves and win their own freedom at the cost of precious working time. Would a renascence of wonder such as occurred in Russia be possible in our country? There, an uneducated people stumbled on the tools and methods of science in the freshness of their need and enthusiasm. In our Western democracies, we are too often numbed by a varnish of knowledge that keeps out the vibrations of wonder.

Our archetypes are in the As-Yet-Unknown. Physics knows this, chemistry knows this, art knows this. The endless search is the proof of that faith. Why should politics or economics or religion worship only the known, the formulated, the already revealed? The spirit of worship and wonder about the As-Yet-Unknown should pour over into our world of social organization. Truth, not expediency, should be the guiding principle of our social philosophy. That is why a faith in the intelligibility of the As-Yet-Unknown is necessary to a stabilization of the world of the future. We need human intelligence to abstract and organize that synthesis. The only way we

shall have an intelligible social world is through the medium of intelligent human beings. Scientific humanism finds it hard to believe that there exists a body of truth on the basis of which the sciences of physics and chemistry can be built, but that there is no corresponding body of principles about the nature of man and of mind. Science does not create laws out of nothing, it merely gives them forms convenient for our contemporary use. Social principles must likewise be founded on truthful knowledge, not on arbitrary formulations.

The weaving of the woof and warp of the Known and the Unknown is the process of integration in the life history of our planet, the alignment of the "body" and the "mind" of our world. Our planet is an organ in the body of the universe, and must fulfil its function. Its evolution is to some extent isolated within its own magnetic field, and yet is part of the whole Human genius is not "cosmic consciousness." It is planetary consciousness. An insight into the nature of our planetary life is for the present all that the human mind can "take." Anything that we presume about the universe is in terms of planetary consciousness—a human faculty, achieved and experienced. It has become a part of the human heritage.

15. Once the consciousness of universal relationships is globally accepted and becomes a faith and a conviction, the dynamic of a common destiny will run as a cohesive force through our personal and group activities. Scientific humanism believes that if we fail to achieve integration and social synthesis at the highest levels, which is global co-operation, we shall perish from uncontrollable conflicts among smaller units. This faith and conviction—

Planetism, in short—is the religious spirit of humanism.

16. Scientific humanism sets as its objective a global society, a world federation of friendly cultures, wherein national and cultural groups will be free to cultivate to their utmost their local contributions to the cultural whole; in which member-groups will be valued for their qualities and not alone for their statistics, in which the individual's right to his personal uniqueness will be preserved in a society that protects his common rights as a social unit.

Man's happiness is not promoted by excessive paternalism, by a code of rights unbalanced by a code of responsibilities, but rather by an environment in which all his potentialities are evoked in service, his natural aptitudes developed into skills, in which he is totally employed—total employment meaning not merely that all men have access to labor, but also that the individual man has all his capacities employed, physical, emotional, mental, and spiritual.

Total man in a world subserving humanity is, in the vision of humanism, the goal towards which human consciousness is striving. The failure of philosophy to evolve in recent times is a phase of man's delay in achieving a kind of society which technology now makes possible but which politics treats as Utopian. Scientific humanism offers itself as an emerging philosophy of synthesis and dynamic human vision which can unify the aspirations of humanity for a new faith and a new society.

CHAPTER V

THE BATTLE OF MAN

As we have already observed, the discovery of truth and a program of social reform must go hand in hand. The action that must arise naturally out of our modern idea of Man and our faith and conviction concerning his function must lead to a new order of society. Out of the "dazed awakening of a thoughtful minority" we have acquired, in the last decade alone, a great library of studies and outlines for a planned economic system made essential by our technological activity, for a political organization of the world literally forced upon us by our developments in communication and transportation; and now, for a philosophy that naturally emerges from our new scientific knowledge. We cannot treat the new age with the outworn concepts of the old.

"We no longer live in a regime of scarcity, we have passed into the day of potential plenty," writes Harold Rugg.¹ "For the first time in the world's history, man in America can now produce a civilization of abundance for all. *And our language and our thought must from now on show that we know it . . .* Our era of plenty is only potential, not an actual one. To bring it into existence will require the building of a distribution system which is co-ordinate in effectiveness with the production

¹ "The Artist and the Great Transition," in the symposium, *America and Alfred Stieglitz*. Italics are ours.

system which has already been erected. But to do that in a democracy, many minds must be made aware of the necessity of deep-running changes in the ownership and operation of basic utilities and industries . . . New problems of social control now confront us, and to deal with them we must build a new language of discourse . . . We have moved from an epoch which demanded action and precept above all things into one in which design and realization are possible."

The realization that action is necessary has taken firm hold on most of mankind today. Few thinking men anywhere in the world believe that when the war ends, social stabilization will emerge as a matter of course. It is generally granted that when the war is over, the world will be reeling, and that before we can hope to settle down into anything approaching stable social affairs, the period of relief will be followed by a long period of reconstruction. It will be a long time before any thoughtful man or woman will be able to live as a private person. Whether we like it or not, the collective life of mankind intrudes into every home, every class room, every workshop, and every other place where humanity is in action. To maintain one's personal integrity and at the same time lend one's aid to the integration of society is today the responsibility of any man or woman of intelligence and sympathy.

Waldo Frank writes.²

The integral society in which a true person can live will be one in which the whole, by its normal function, gives health to its individual components, even as its individuals,

² "The New World in Stieglitz," in the symposium *America and Alfred Stieglitz*.

by their normal function, give health to the whole. Such a society implies, no less, the existence of the integral person. In it, the universal sub-person of today—the power man, the schemer, the prowler, the exhibitionist, the megalomaniac—will be dangerously out of place . . . If by some miracle such a society were to be established somewhere in the present world with the present types of sub-persons yet prevalent, they would destroy it and replace it with a society like our own, a world in which their greed, blindness, separatism, servility, and egolatry could again safely prosper.

In its barest outline the integral society may be one defined as one without *economic* classes; one based on collaboration and not on exploitation, one in which the values of life and the disciplines of leadership will be totally dis-severed from the possession of goods. . . .

The day's command is to mother, from the life of the past worlds that breathe within us, the new world, not one in which we may live as our fathers lived, but one in which Man at last—the Man potentially in us all—may be born. Myriad creative men and women, teachers, artists, scientists, toil together although unknown to one another, toil in passionate obedience to this command, toil in ways as variedly profound as must be the world in which the new-born Man—the true person—with his exquisite sensibilities and his enormous powers, may prosper. The work of these myriad good men and women is a symphony, and although they know it not, the major theme of all their complex music is the creating of true persons.

We have at our command now, we have had for a long time, the power to create an improved scientific civilization in which there could be plenty for all, labor for all, recreation for all, and so on. The Four Freedoms are the logical expression of our contemporary knowledge. But we shall never achieve this society without

developing a coherent theory of human nature and a universal conception of the value of human personality. The building of the new society must not be left to scientists and technologists, even to socialized and humanized scientists and technologists! The social problem will be so insistent, so technical, and even so mechanical that we must also provide a place in our plans for reconstruction for those whose responsibility is to guard the *rights of the personal life*. It is here that the artist can supply us with our data.

The problem of the personal life is a different one. Self-cultivation must be the keynote of this problem, as social planning is the keynote of the other problem. In a scientific society we must have those whose vigilance will ensure the natural unfoldment of that sensitivity and enrichment of the out-going personality without which democracy would be fruitless. It is not alone the full lunch pail and universal suffrage that symbolize democracy, but also the release within the social unit of one's own natural resources and their development.

Whitman chose as his representative American the poet, not the business man or the scientist or the politician or the laborer. The poet was the Answerer, the Great Individual, who represented in himself democracy and creativity, human relationship, and spiritual striving—the true culture for which the planned economy and world federation of nations is the outer setting. It is his status as *man* that makes the new society necessary. If there were no new man, what need would we have of a new society?

The new man will be struggling with problems of articulation and meaning, not only with problems of

production and distribution, of inventions and application, for these are his old problems. They can be solved when he knows *why* they should be solved.

Industrial society has meant so far in our history the herding of men and women into factories, the education of generation after generation to fit them into the prevailing industrial mold. Arthur Lismer has pointed out that in the past it was the business of government to educate citizens to earn a living, but with the advances in mechanical ingenuity, the time has come when earning a living will occupy not the major, but the minor portion of a worker's life. In the future, it will be the business of government to educate its citizens for leisure—for there will be a great deal of leisure.

Industrialism with its low wages and social insecurity dragged wives and children into the factory after the so-called breadwinner. It robbed men of the deep-rooted sense of providing for and protecting their dependents, it robbed women of the feeling of security in the man as provider, and so at one blow crossed two ancient, emotional reactions. It was industrialism that to a considerable extent undermined the home, increased juvenile delinquency, provoked economic strife between the sexes, and gave us our slums. It is the first charge upon a planned economy, as the Beveridge Plan and other similar plans indicate, to eradicate the social inconsistencies at which we have so far been merely nibbling by alleviating laws which have been enacted here and there since we first took seven- and eight-year-old children out of the coal mines. But that planned economy must on no account be planned merely on the thesis that we have the natural resources and we have the machinery and we have the

organization to distribute as much as we can produce. If we go ahead planning a world organization on that thesis, man's "hidden hunger" will never be satisfied, and in another generation we shall go fretfully into another war in search of other experiments. We must plan on the basis of scientific humanism, recognizing *why* we must make the machine serve man, *why* the natural resources of the world are man's to use for his abundant living, and *why* man must strive by education and democracy to press his own self-evolution urgently and wisely.

Harold Rugg goes on to say:

Two crucial problems of design confront us . . . the first the problem of designing a social structure that will produce the economy of abundance which is guaranteed by our resources and our technocracy . . . the second the problem of designing a creative and appreciative personal way of life within that structure. The nub of the former is social control, that of the latter is self-cultivation. The guide to the former is the technologist and experimentalist, the guide to the latter is the artist. The truly great culture on the verge of which we now stand cannot be ushered in if either of these problems of design is ignored.

The problems of social and personal design involve changes in education, not merely formal, academic education, but in the press and radio and any other medium of disseminating news and views. To achieve our new life under a democratic system, the only recourse is to education. "New minds are to be created. New personalities are to be brought forth. A new orientation to life is to be developed," writes Rugg. "A new language must be evolved. But these are the products of education. They can be brought forth only by many people taking thought

about their society and their personal lives. So it is great teachers that we need in these chaotic years, teachers who see clearly through the tangled maze of current events. Some of these must be rigorous students of social reconstruction, others will be masters of personal self-cultivation."

It is in the power of the United Nations, even as now constituted, to adopt such a program and to make sure that it takes root and flourishes. The end of the war will find us with the actual, organized framework of a world society. The reconstruction of the world that lies ahead of the United Nations is not merely a political reconstruction or an economic reconstruction. We will have the physical health of hundreds of millions of people in our hands, we will have the re-establishment of educational systems for hundreds of millions of people in our hands, we will have the cultural rehabilitation of hundreds of millions of people in our hands. If we throw away our opportunities, we will have lost centuries of time. If we accept them and put the breath of life into our work for a global society, then we already have a world organization, a functional, basic society that can begin at once its world program of food distribution, with a controlled world transport and communication system, under a world price control, and a network of hundreds of thousands of small war-time community committees on every continent that can be transformed into peace-time auxiliaries of world agencies for rehabilitation, education, and co-operative action.

It is the frustration of scientific knowledge, the failure of time-binding action, that provides those periods of time in which the anti-human groups are free to split

mankind up into warring ideological camps, which give the opportunity to organize and misappropriate scientific data so that it becomes material for false teachings about man and nature. Fascism is an example of a selfish, barbaric set of teachings which have misused and distorted scientific data and turned it into a pseudo-science, forced upon large sections of humanity under the sanctity of scientific conclusions. The next step is to discredit science itself in the minds of embittered and confused humanity.

Scientific humanism conceives in time-synthesis the means of freeing humanity and protecting science from misuse. War, or any other form of collective force, is the last means scientific humanists would choose to establish a democratic form of society, *but* they believe that when a final choice must be made between condoning the dis-honoring, mutilating, or ploughing under of truth, and fighting for the faith and social values, the hopes and plans of scientific humanism, then they would rather fight than surrender. Nevertheless, they believe that if the enlightened peoples of the world would close their ranks, would pool their strength and speak with no uncertain voice, would raise with steady hands the oriflamme of faith in human intelligence and human vision, then the enemies of humanity would come to early and inevitable defeat in the parliaments and councils of the United Nations.

Long before these days in which we openly speak of socialization of common human services, many of these services came into being. There was once a time when highways were private property, and we paid tolls at gates across the roads before we were allowed to travel

on them. Even armies and navies were once matters of private enterprise, privately owned and operated, and hired to the highest bidder. Such were the German mercenaries who fought for the British in the American Revolution, and the privateers who fought in any war that was profitable. Once letters had to be sent by private messengers before we created a public and socialized postal service. Schools were once all privately owned and operated, either by individuals or religious groups. We do not think of universal education, free and compulsory, as socialism—but it is. Street lighting is the socialization of the link-boys, the police force is a socialist venture in providing protection for all, not merely for those who could afford to hire private guards. Medical health services and public clinics are the foundations of socialized medicine, for no one has the private right to be a bearer of infection.

Further socialization plans are merely evolutionary. They emerge out of two factors, the facts of a changing situation and the pressure of human aspiration towards more abundant living.

We already have world-wide organization which can be evolved into component parts of a world federation of peoples. Our economics are now world-wide in scope under private organization; our banking affiliations are world-wide; our shipping companies have world-wide relationships, our tourist companies, such as Cook, are world-wide organizations. It is a natural, human, evolutionary development that such planetary enterprises as these be incorporated into one over-all picture of global society. *But we must act soon.*

"Instant action based on great vision is demanded of us," writes Michael Straight,⁸ "great vision and new vision. Whatever it is that is resolving itself in this caldron of war, it will be new."

Michael Straight is of the generation that will govern the new world. He speaks for that generation and for the generations that come after it.

"Instant action is demanded of us; action to make plain our vision, action to translate it into the most immediate needs of the war; action to see that these needs are satisfied. Action which does not follow thought now is worse than useless, thought which does not lead to action is crime."

Straight is an economist. He shows us that the savings of the American people alone are so enormous that private capital cannot invest it fast enough to prevent financial congestion and economic disease. It must be used for social projects to prevent a recurrence of depressions. At full employment, American labor saves in *three weeks* enough money (surplus money that must find an outlet) to equal the investment of a hundred millions of dollars in the whole Tennessee Valley power project—seven huge dams and hydro-electric stations, new roads, new towns, new transmission lines—the greatest single development ever undertaken by the American people. Yet unless this money that is withdrawn from circulation in savings can be drawn out again into circulation, incomes cannot be maintained, purchasing declines, factories close, and a depression is on.

He shows that unless the great tide of savings is turned into social planning there is no way out of the vicious

⁸ Michael Straight, *Op. cit.*

cycles. "In a future world society, no social service state, the social objectives of which are limited to keeping men alive who have been deprived of work, begins to be adequate for the purposes of world unity. And no state which limits the right to work to public relief projects, to which all the stigma and wretchedness of home relief are attached, is any better."

Straight points the way to an "affirmative society," not merely one that passively attempts to patch up the damage done by an outworn social plan. With the precision of a surgeon, he lays bare the diseased places in our society and then tells us how near to health we are if we can rouse ourselves to positive, affirmative action. The old order in Europe is gone. Are we going to restore it? It will never again raise its head unless we, the United Nations, nurse it back to a renewal of its senility. If we do restore the old order in Europe, there is no hope, anywhere in the world, for the new order. "We need to learn now that the world has become an island, indivisible."

Probably no one has placed a finger so accurately on the causes of the failure of the League of Nations as Michael Straight.

When the League collapsed under attack, it demonstrated its one fatal weakness—its failure ever to reach beyond governments to the peoples of the world who believed in the League . . . the League was never permitted to associate peace and social justice. Certainly the League carried out useful functions in its non-controversial work as a glorified Postal Union. But in the presence of the world's three great and unloved yearnings, the League never reached down to ease the day-to-day misery of the economically impoverished, the day-to-day resentment of the socially exploited,

the day-to-day longing of the unfree. The League was used, even at the end, as a means of actively denying these yearnings. Yet they are the great forces of world unity today! They are the yearnings of nine-tenths of humanity¹! On them now and finally the future of any world organization depends.

Once these yearnings become forcefully articulate, they can be satisfied. We have the scientific knowledge, we have the technical experts, we have the means of communication and transportation to create the kind of world that nine-tenths of the people of the world want. Straight goes on

We need to think in entirely new terms about our world organization. We need to think not of an organization that will protect us against the crushing forces of world disequilibrium but of an organization that will go out to meet these forces and crush them, that will establish the underlying balance on which a structure of political agreement can be constructed

Straight's new world is a homocentric world. And it is a new world within our grasp.

Two-thirds of the world's peoples joined the United Nations at the moment of its inception. Now its twenty-nine nations possess three-quarters of the world's economic power . . . If no more countries than these were to join the United Nations following the destruction of the Axis, the United Nations would retain such overwhelming concentration of raw materials resources, of finished production, and of military weapons that, given their cohesion, world peace could be enforced

The Atlantic Charter is the basis of that world organi-

zation, the Four Freedoms are the first bill of rights of the *individual man* in a world order.

The war boards of the United Nations can be converted to peace boards, if we are alert and vigilant, and see to it that they are not destroyed as soon as the war ends by subversive elements determined to destroy these symbols of world unity. A vast amount of experimentation in world collaboration has gone on during the war. It is data for the machinery of the new world. Let us see to it that it is put to work in time-binding action *now*.

We cannot express the power that is in our collective minds without global forms to enact our conceptions. Our collective minds no longer are confined to personal, family, tribal, or even national affairs, our minds have extended to encompass the globe, and, to act what we think, we must achieve global powers of action.

Every school child is now accustomed to hearing reports daily over the air from Melbourne and Algiers, Stockholm and Moscow, and many other places that were unfamiliar before the war. Since all the United Nations have their fighting men scattered to many corners of the globe, men of many races and nationalities are more widely dispersed and more completely shuffled than they have ever been in human history. We have become anxiously familiar with conditions in strange and obscure places the names of which we must learn to speak. Words such as Bizerte, Rangoon, Spitzbergen, Guadalcanal, Dakar, and Madagascar have become the common coin of our speech, and our minds and emotions are already enriched by the personal concern awakened in all of us by events all over the planet.

With us, global democracy is already something more

than a political concept it represents a fusion of all our thoughts. Yes, and also a deepening and enriching of our cultural concepts. We know that never again can we enjoy a prosperous West if its well-being is founded on the bitter labor of unknown men and women in mines and rubber plantations, in wretched rice fields and unholy jungle swamps, for the conscience of the advanced nations has been sensitized by a knowledge of the sources of much of their wealth and comfort. We can never again pride ourselves on our inventions and ingenuity, our abundance and our luxuries, unless by our intelligent action we offer like opportunities to all our neighbors. In the future, the Good Neighbor Policy will be practiced everywhere in the world.

Everything man has come into being first in his mind. In man's mind must also come first the resolution of all the conflicts that have arisen between men. Vision must come before action, the goal must be sighted before men know in which direction to set out; but the creative momentum that is set up when a man or a group of men reach a solution of any given problem will break the shackling power of inertia and carry the man or the group forward toward the goal.

Every invention, every institution, every work of art, every religion, every theory set in action, is a man-made form intended for the release of power. Energy exists universally, but it functions specifically only when it is given a form through which to function. Every form is useful only so long as it serves to canalize that energy usefully, whether the form is a natural organism or a human invention. Man has created and discarded many inventions—in government, in religion, in trade, in edu-

cation, in philosophy, and in many other fields of his activity. He is endlessly creative, always able to produce new forms for his appropriated power as they are needed. His chief obstacle to natural evolutionary growth is not lack of inventiveness, but the obstacle involved in removing his old inventions when they have been outmoded. Old forms which have become familiar are hard to destroy, even when the life has gone out of them, when power no longer functions through them. Old institutions, old religions, or old customs, once they have fulfilled their purpose, should be allowed to pass quietly into oblivion and be replaced by new forms more adequate to the increased power released by man.

The art of relinquishing is the polar opposite to the art of invention, and of equal importance. When man can look creatively upon that which needs to be relinquished, can accept the death of a theory as naturally as he accepts the death of its inventor, then we shall make our human changes with less distress and suffering, part with the old and accept the new, as we now part with summer and look forward to spring. There is little sense in condemning any outworn form of religion or politics or economics as vicious or silly or evil. *It was true in its time. It was good in its time. It was beautiful in its time.* But it has had its birth, its youth, its maturity, and its decline. An individual who clings always to the past, to his parents, to his childhood associations, to his adolescent emotions is mentally ill. So, too, the nation or race which looks always to the past, to its history, its antiquities, its great of other days is mentally ill. It exists in our space, but lives in a time past. (f. 141-2)

Man himself is a form of power. As an individual, he

has a "potential" which is released efficiently through a co-ordinated personality. Collective man, humanity as a whole, is a form of power, and the greater the co-ordination between the various parts—each part with its special functions expressed in national or cultural groups—the greater the release of humanity's "potential." We speak of an organized personality as one that has brought all its parts into synthesis, or unimpeded function. An organized humanity would also bring all its parts, the races, nations, cultures, skills, and religions, into synthesis or unimpeded function.

The world community that will inevitably arise out of this war (because the world is one in experience as well as in scientific theory) will be an attempt to provide the universal forms for the release of universal power. We must have a global administration to unify the federated peoples of the earth, because man's conception of society is now a global one, we must have a global economy because our trade routes are global in character; we must have a global civilization because our communications are global. Air waves know no boundaries.

These things are not the dreams of visionaries. They are the practical politics of today. Human knowledge has forced them upon us, human skills have invented this world which we recognize and accept. If sanity is "adequate adjustment to the world of facts," then we must move swiftly and surely to restore our sanity. In this generation, there has been an imbalance between material and spiritual progress, between science and morality. There are two alternatives before us when we attempt to restore that balance. One proposal is to take a "research holiday," that is, to call a halt to the pursuit of truth and

the investigation into the nature of the universe. The other is to equalize the human effort put into research by a like human effort put into the development of morals and social equity.

Since it is obviously silly to talk about a moratorium on scientific advance, we have only the second alternative, that of speeding up the ethical-social controls which society can exert over scientific developments. The trouble here, however, is that in the past the field of morals has been the domain of wishful thinking and emotional exuberance, a kingdom of ideal ends having little to do with social realities. As we have seen over and over again in the past, science (knowledge) and ethics (desires) have been mutually exclusive domains. There has been no way to convince the selfish individual, corporation, or state that it does not pay, even in selfish terms, to disregard the interests and welfare of others. What we now need is a system of ideas enabling us to put ethics on a scientific basis, to show factually that selfishness is self-defeating. But can it be demonstrated that unselfishness (i.e., conduct which arises from a desire to seek the welfare of the more inclusive or social whole) is mutually advantageous to all in the long run?

Such a linkage of facts and values, a fusion of science and morality, is possible only if it has the support of a general theory of nature—in short, a metaphysics.

The progress of physics in recent decades arose out of an effort to create a coherent theory of physical reality. When the same effort is made to match it with a new theory of social reality—scientific humanism—then we shall make the same progress in metaphysical and ethical evolution as we have already achieved in molding the

physical world to our own conception of materialistic evolution. We will develop new states of consciousness as we now develop new conditions of industry and trade. We shall begin *now* the creation of a new mentality, a new way of thinking—global thinking—as the inescapable preliminary to global planning and world community. Action *now*—yes—but action in the mental world and the ethical world as well as in the physical world.

The nineteenth century glorified the individual—the successful individual. It was the era of atomism. Every atom of science was a complete, self-existent entity, the ultimate particle of matter. Every man, theoretically, was a self-existent particle of society. When science discovered that the atom was not self-existent, not an ultimate particle, but an organism dependent on its field of space-time for its character and function, then the philosophical basis for egotism and private interest was dissolved. We now know that man is not an ultimate particle of society, that he does not individually create values, but owes his nature and his values to his relationships, both to his fellow men and to nature which is the vast continuum in which he exists. The universe is a powerhouse, and man is an outlet for power—he cannot separate himself from that powerhouse though he may limit or extend his capacity as an outlet, and he cannot limit the effects of his actions on others. What he is and what he does is part of the social whole. Democracy is inherent in that fact. Individualism takes on a new dimension, it implies not selfish rights, but universal relationships, it is the individual that can *realize* relationships, it is through the fulfilment of individualization that man evolves from the sub-person, enmeshed in mass instincts, into the individual

capable of choice and direction, and at last into the supra-person whose relationships are conscious and creative. The evolution of individual man parallels the evolution of humanity from the negative mob, submissive to tyranny, into the social organism of the world community.

To escape the influences of scientific materialism, we must create our new vision of the dignity of man to fire the imagination of multitudes into the conviction that the future of man must be created by man. Once man thinks for himself, his evolution is in his own hands.

So back of the labor to be put into a planned economy and a world community there must be a concept, a philosophical ideal, which will rouse humanity as a single organism to pour its united power into the form being prepared for its society. If each man is an outlet, an individual "potential" for the higher formative energies of the universe, then collective man is a collective outlet, an irresistible high tension transmission system, for the creative energy which is inexhaustible and omnipresent. Human desire and aspiration are not enough. The human will must be mobilized into a single unified instrument that will activate a single, unified society created to suit the new mind of modern man.

Reactionaries everywhere are already saying that "bureaucracy will fail," that planning will fail, that price control will fail, that supra-national organization will fail, because these things are "unnatural" and that men depend on competitiveness for their vitality. They do not fear that these things will fail—they fear that they will succeed! Every successful co-operative enterprise chalks up a defeat for the old theory of man's basic competitiveness, a defeat for what the British minister, Morrison, calls

"private un-enterprise" We are learning in this war, in which we plan or perish, what can be accomplished by collaboration (and only by collaboration) against the greatest planned assault upon human dignity in the history of the race. We are learning the hard way, but we are learning. If we can plan and collaborate in times that brought the spirit of democracy to its gravest peril and put incredible strain upon the morale of free men, surely we ought to be able to plan and collaborate when the strain is lifted, and we have time and freedom to work out our social problems without the threat of disaster hanging over our council tables.

Today in the island fortress of Britain, with civilian supplies at an all-time low, its citizens as a whole are better fed, their health better protected, than ever before. Despite life in air-raid shelters and fuel shortages, British health and morale testify to the success of social planning. Scientific intelligence allied to social responsibility can work miracles even in the dark hours of total war. Millions of people have learned that the ingredients of social equity come not from banks but from the human mind, and that but for human genius, gold would be worth no more than pebbles on the beach. There is not a modern industrial private enterprise but owes its origin, its patents, its machines to the personal enterprise of human genius. Every discovery, every invention upon which modern civilization is founded, came to us as the result of disinterested, patient research on the part of men who had no private plans for their creative work. They either offered their knowledge freely to the world, or sold it, perhaps for a pittance, to uncreative organizers who used the knowledge, when it suited them to do so, to produce

the things of trade. When discoveries or inventions offer no profit to industry, they are ignored or suppressed. That was the nature of our old social system. It was not the responsibility of the industrialist to put on the markets of the world anything that did not provide a profit. The competitive nature of our social system made it impossible for anyone to work within it on anything but the basis of the profit motive. How much we have lost of human invention because of this we shall never know.

So part of our new mental attitude, part of our global planning, must take into account the sum-total of creative work produced by men in research work of all kinds, in all fields of advanced speculation and inventiveness. We must regard it as a whole. It must never again be fragmented to suit private interest. The men and women who produce this work must be protected against their own lack of self-interest and also against the possibility of being drawn into error by the selling of their formulas to purchasers whose chief interest in them is profits. The discoveries and inventions of men are the natural resources of the collective human mind, built on the accumulated knowledge of the past and evoked by the socialized educational system of today. They should be the assets of society just as the natural resources of the earth should be the physical assets of society. Global planning must under no circumstances be limited to the material things of the world. Experience, history, as well as science prove that it is impossible to draw a line between physical resources and psychical resources, for without the fruits of discovery and invention we would have no means of using the physical resources of the planet. Indeed, we would have no conception of their

use or value. With the planned, controlled use of all kinds of resources, we can make a world such as already exists in the imagination of scientific humanism.

Out from under the crushing weight of Hitlerism in Europe, from the underground organizations and the secret presses, many hundreds of them, there comes a cry. "Federation and socialization." Out of the very graves themselves, the unsilent dead, the patriots, the hostages, the tortured men, women, and children whom Hitler could not subdue and could only kill, there rises the trumpet voice of man at the birthing. Like the soul of John Brown—they go marching on.

We who still live in freedom, who can still read and write and speak at will, who can still pool our ideas and plan our actions, we must prepare ourselves to meet the liberated people of the East and of the West with enlightened minds and understanding hearts. We must be ready to combine the results of our democratic thinking and planning with the results of their fierce hoping and spiritual Gethsemane. We must not sleep while they pass through their final agony. We must watch with them their hour.

We of this generation must face the fact that for the rest of our lives the world will be in a state of re-organization. We will not know the leisure, the comfort, the wealth, the indifference, of the nineteenth century. The razing of old institutions, the wiping out of ancient slums, the digging of new foundations, the pouring of steel, and the mixing of mortar will be a noisy and dangerous and dusty business. But we will trade our old nostalgias for new enthusiasms, our familiar doubts for living hopes, our old fears for new confidence.

Our old world of mechanism and expediency is gone, it is a lifeless moon spinning around our new world. Some will bay at it, some will yield to its romantic glamour, and some will be afflicted with its lunacy. But we cannot live in two worlds, and those who can think must choose the new one. It needs every pair of willing hands, every open and generous heart, every clear and imaginative mind to bring it to fruition.

There is a chance that we will fail—that the forces of reaction, the devotees of the old moon, will dam up the streams of our energy, if they are too many. They can undermine our hopes and plans, frustrate our efforts. What can prevent it?

- (1) An Idea. a coherent theory of human nature and of the place of man in the universe.
- (2) A faith, a conviction, that man's concept of man can be put to work intelligently to create an environment essential to man.
- (3) Action—unified, supra-personal, supra-national action—made up of an infinite number of individual acts by individual men and directed towards a common end and a common loyalty.

Every human being who believes in his own dignity and in the common dignity of man must think of himself as a buttress of the new world, lending his strength and his will to the foundations of the new society. There can be no nobler or happier destiny for any man living today than to cement himself, by faith and effort, into the very structure of the new world.

PART II
APPLIED SEMANTICS

SCIENTIFIC HUMANISM AS DYNAMIC DEMOCRACY

I. DEMOCRACY: POLITICAL AND ECONOMIC

Not one of us is without the power to contribute something to the making of the future

Not one of us is free from responsibility for the making of the future

In these propositions we have the twin foundation stones of humanism, namely, the value of the individual and the responsibility of the individual. These are interlocking principles. Each of us must realize his own value and his own responsibility.

The creation of the future is the work of every one of us, no matter how small our capacities and how undeveloped our skills. Except for the very few, we are all amateurs in the field of social creativity, a field which must now become so broad and deep in its appeal that it enlists the reserves of every thoughtful man and woman. Our capacities and our skills will improve through use and effort, and we must begin somewhere, sometime. Surely our present emergency provides us with the incentive to begin here and now.

Humanism is a philosophy of life which can be more deeply moving as we become more actively human. Our

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best characteristics are only moderately developed. We are, for the most part, only partially human. None of us has achieved anything like the possibilities latent within our present form and nature. One of the great discoveries of our times is the persistent teachability of the human being. There is not a moment between birth and death in which human beings cannot acquire new skills. And none of us has developed to the full the imagination, the will, the reason, the power to observe and to evaluate, the power to heal, to love, or the power to create. None of us has gone "all out" in the living of this life-time; none of us knows "total living" as he might know it. It is the unlivèd portion of each individual's life that marks his real tragedy.

If we hope for a society that embodies freedom and security, a society that will control the material things of life and yet not lay a sinister hand upon the imagination of free men, but leave a place within society in which each man may think his own thoughts and cultivate his own peculiar genius for personal living, we must begin now by allowing to each individual around us a small area of life which is unique for him. The best safeguard against standardization in a planned society is a universal appreciation of the richness and variety that arises out of the uniqueness of human personality. We must let each individual nurse his idiosyncrasies and eccentricities, while at the same time keeping in mind how small is the area of his total life occupied by them. We must determine to co-operate with each other in that larger area which is the common life, and tolerate each other in that little area of uniqueness.

Some of the things we have in common and which set the pattern for the larger area, within which individual uniqueness can then exist, are as follows

(1) The political structure of the nation. None of us can escape that, whether it be conservative, liberal, or radical.

(2) The laws of the nation. None of us can escape them though we have the right to try to alter them.

(3) The economic system of the nation. Within this system we may prosper or starve, go up or go down. Certainly we have the right to demand revision of economic policies and institutions, but while we are in process of tinkering with these arrangements, we are controlled by them.

(4) The educational system of the nation, its schools, libraries, the press, the radio, and the "movies." While we are in the very process of reforming them, they yet continue to influence our behavior.

(5) The basic climate and geography of the country, its fertility or non-fertility, its mountains, rivers, valleys, topography, and the rest. To this may be added the social-psychic atmosphere, based largely on the country's history, traditions, customs, institutions, and the like. None of us can escape these things.

No matter how much we may pride ourselves on our individualism, our uniqueness, we must admit that there is a large part of us that is collective, hereditary, and by no means unique. Humanism, however, is interested in preserving that small part, for it is that uniqueness which is of supreme importance to each of us.

Humanism conceives democracy as a dynamic affair,

concerned with the detailed working out of a way of life in which education, training for labor, and the right to the expression of normal human emotions are provided for; where marriage and the right to home and family will be based on the "human demand" and not on the ability to pay in cash, where health will be provided for by a sound agriculture and normal living conditions, with recreation, cultural activities, and social security.

All these things are part of scientific humanism as a philosophy. They are integral to its program of "time-binding." But bigger things are also in order, because they again must set the wider pattern within which these objectives must be attained. The Atlantic Charter is such a comprehensive idea. We must begin our small-scale, time-binding activities by bringing them into alignment with our Charter and our society. One step in that direction was taken in the abolition of the extraterritorial rights in China. And it was a step in the correct direction.

So far not a voice has been raised among us to repudiate the Atlantic Charter. We are committed by our national signatures and our approval of this global idea of a better way of life. We have endorsed such things as the renunciation of any profit from the war; we provided against territorial changes on the basis of selfish interests; we pledge a fair distribution of wealth and raw materials; we are committed to better labor standards, to social security, to world peace, to free travel, to abandonment of force, except as it may be applied by the world police force of the United Nations. We have undertaken to co-operate in a federation of friendly peoples, a global democracy, we have sworn to co-operate in a great, unified, conscious change in human society.

II. DEMOCRACY: RELIGIOUS AND METAPHYSICAL

The intuitive estimate of democracy is that it is something more than a political or an economic concept.¹ Insight into the essential unity of life, or into integral living as we may call it, carried democracy far beyond the status of political freedom or economic equity. Democracy to the artist or the poet or scientist is founded not on legislation but on the basic "potential" within each one. Whitman called it "deific identity", Paul called it "Christ-in-you", the artist calls it the creative self. There are hundreds of definitions in our literature for this thing we here call "the super-personal, striving entity." Intuitives in all times and all places agree that there is a body used by the Self within. This Self in a sensitive personality has a driving force that overcomes all personal considerations so ruthlessly when conditions demand that AE called it the "interior tyrant." Anyone who is not limited to instincts at the level of animal existence becomes conscious sometime or other of "intimations of divinity." The man or woman who, in some great emergency finds courage to transcend all self-interest or physical safety and achieves some act of selfless devotion, looks back to that time with a nostalgic desire to experience again that flight from the personal to the super-personal, to renew the sense of a new Self with new powers and vision. Anyone who has experienced genuine inspiration, the intuitive intrusion of a true idea, new

¹ Intuition, for us, is recognition of the abstract elements and relations exemplified by formal structures. We use "intuition" as synonymous with "insight" which is discussed in Chapter XII.

and significant, will always long to renew that contact with a higher dimension of mind.

For us, religion at its best has always been a technique by which the rational mind is "married" to the intuitive mind, the freedom, wisdom, and beauty of which, once experienced, even momentarily, leaves the brain with memories and longings that in their aggregate have motivated all human search for the good, the true, and the beautiful.

It is on that level of consciousness that all intuitives recognize man's equality and consequent democracy. No rational mind believes that all men are equal as personalities or as social units; that theory can beget a cold, escapist attitude. One who is born with a good brain and nervous system, who has had adequate education and is economically free, might then say to another who is born handicapped, both physically and economically, "We are equals. You make your way in life as best you can, and I'll make my way as best I can. This is democracy." That, in effect, is what many have said and so prostituted the democratic spirit. But if one says to the other, "As spiritual beings we are *potentially* of the same nature and quality, and democratic society gives us the opportunity to push our self-evolution to the utmost," then we are expressing the democratic spirit.

If we think of religion in this sense, we find at once that it is impossible to detach religion from philosophy, or democracy from philosophy, or democracy from education, or education from the arts, and so on—to treat each thing in the Aristotelian sense of "absolute identity." There can be no decent religion without a philosophy, no education without the arts, no democracy with-

out self-evolved individuals to point the way to the twin imperatives of self-cultivation and social planning.

There can be no absolutes in any of these things. They are interwoven by the laws of relativity into a compact whole which is truly a reflection in human society of that "super-conscious cohesion" (Picasso) which intuitives report as the nature of the real world. For just as there is in man, by common report, a "super-physical striving entity" so there is in the universe also a "super-physical striving entity" to which many names have been given. Sometimes we call it the "real" world. Yet this real world is not some other world, any more than the soul of a man is some other man. Both worlds are one, both men are one. This visible and tangible world is fused in every atom of its substance with the real world, every cell in the body of a man is fused with his real body of being. The laws of one apply to the other. The world mystery is not something somewhere else of which a man "goes" in search. Without the mystery there would be no man, no world. We are in and of the mystery. The glory of man's mind is that he knows there is a mystery, the As-Yet-Unknown, and that his finite mind has the embryonic means and the urge to unravel the mystery and translate it into working knowledge, to embody intuitive realization into transferable facts, his faith into action.

Nothing that stands between a man's mind and his intuition can pass for religion, nothing that offers to do his thinking for him can pass for religion. There is no class or caste of men specially endowed with the means of reaching truth, goodness, and beauty. Men, who are more evolved, can only point the way they have themselves

travelled, teach the disciplines and techniques of self-evolution, constantly reiterate the reality of the intuitive faculty, and then leave it to man to set his own pace on the road to realization.

"Men are driven to their fates," writes William Carlos Williams,² "by the quality of their beliefs." Inspiration he defines as "the full spirit." True religion is the means of constant inspiration. But institutionalized religion has become what he calls "a stencil," a form of repetitious stupidity.

The sense of psychological insecurity that comes to men who are spiritually malnourished with the husks from which all inspiration has long since been threshed drives them into a stampede for wealth, for possessions, to bolster them against their sense of poverty and give them a temporary fullness of instinct in place of fullness of spirit. Possessiveness replaces the natural creativity born with each man. No truly creative person is ever possessive.

Intuition is the means by which man learns the direction of his evolutionary way, perceives the values lying along that way, and sets to work creatively to realize them. Stieglitz says that beauty is the universal *seen*. Perhaps then truth is the universal *comprehended*, and goodness is the universal *lived*.

Organized dogmatic religion is a Western phenomenon. There was nothing in the ancient world, nor is there today in the oriental world, to parallel the great organizations of Christianity which compare in wealth and compactness and territorial vastness with the great trusts

² "The American Background," by William Carlos Williams, in the symposium, *America and Alfred Stieglitz*

and labor unions. The forms have become so great and so inelastic that they are well-nigh impervious to inspiration. They are the effect of the organizing Western mind on the field of religion. They are vastly overemphasized on the body-side of their evolution.

In the early history of religion and in the early days of Christianity, the religious schools (they were not churches in our sense of the word) were recognized as body-soul organizations. In the first centuries of Christianity, the Christian group consisted of an exoteric and an esoteric part. For generations, for instance, the Lord's prayer was considered so sacred and potent an invocation that its use was allowed only by the esoteric section, where its meaning and purpose were known. Anyone who desired out of interest or curiosity or convenience to join the outer group might do so and have access to its teachings in parable and allegory. As a member of the outer group proved by his way of life and by his increasing sensitivity to ideas that he was a fit candidate for the Christian mysteries, he was allowed to pass into the esoteric group and was initiated as a novice. There it depended upon himself how much he learned, how fast he progressed in the techniques and disciplines which led eventually to intuitive insight. A man's or a woman's right to teach did not arise out of membership in a priesthood but on the capacity to speak "as one having authority" or authenticity of experience. Much of the teaching is what we could call scientific, for many of the temples of these schools were places of healing, where psychology and psychiatry were practiced and where those sick in body or in mind resorted to treatment.

When the Christian church became a political power

in the fourth century, it created its canon of scripture which we have today in the New Testament. It realized the revolutionary and disturbing power generated by the schools and small groups of students, initiates, and teachers training for cognitive experience. So the mystery schools and esoteric sections of the Christian movement were suppressed, and their writings, wherever they could be found, destroyed. The whole church was oriented to the exoteric rituals, a theology was created to embody the official teachings of the nature of man, and the mysteries of initiation were set aside in favor of the exoteric Mass.

But since the body-soul relationship and the omnipresent nature of mystery are so integral a part of man's consciousness, they could not be obscured by the organization of non-natural, intellectual conceptions of the universe. Man carried on his search for truth secretly in such occult studies as alchemy, and hid what he learned in a vast system of symbology in poetry and in drama and in other such ways. He did not call his search for truth religion; he called it art and science.

The mystery schools were no more, but out of the remnants of those that had flourished in southern Europe, there emerged the universities. Now they have only the name to bear testimony to the fact that once they were devoted to the mystery of the universe. But the great cycle has closed again. Because of the irrepressible viability of human intuition, it has again reinstated within the hearts of our great schools the quest of the mysteries, our laboratories are the contemporary esoteric schools, the researchers are the initiates of the mysteries. The

scientist has become a mystic. And scientific mysticism is the new religion of truth.

Writing on Whitman and democracy, F. B. Housser says:⁸

The creative attitude is dangerous to all existing orders To nothing is it more dangerous than to the orthodox religion of the day. The creative attitude is essentially religious, affecting life and conduct as religion should affect them But whatever may happen to institutions, the seed of true religion is never lost, because man himself is the seed-bearer.

He quotes Whitman in support of this

I cannot join the men of science in their silent or expressed contempt of the vulgar idea of God. That idea comes out of the abyss—not that it is true but that it is a faint indication of the all-enclosing truth, perhaps induction (as much as the masses can hold) of the truth beyond all science. . . . For America and for today, the supreme and final science is the science of God, what we call science being only its minister, as Democracy is, or shall be also

Dean Inge⁴ declares that “disinterested love of truth is the essence of higher religion.” Faith, he says, is the resolution to stand or fall by the noblest hypothesis, for faith leads to illumination and illumination to the unitive life.

These ideas can be translated into the collective life of man. Only a disinterested love of truth and of freedom can induce society to create what is now possible in

⁸ *Whitman to America The Study of an Attitude* (unpublished).

⁴ In *Tomorrow*, March 1942.

terms of the good life for all. An interested or selfish attitude to knowledge gives us the private privilege we have today, monopolizing the fruits of human knowledge and invention for private greed. The faith of the collective man, the faith of scientific humanism, must be based on "the noblest hypothesis," a wide picture of probabilities by which collective man will stand or fall. Truth and vision come first to individuals, for it is the individual who is the scientific mystic. But because the modern mystic is scientific, his intuitions are related to his fellow men by the acceptance of responsibility (which is one definition of love).

"The most beautiful thing we can experience," says Albert Einstein, "is the mysterious. It is the source of all art and science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand wrapped in awe, is as good as dead, his eyes are closed." Einstein, as a mathematician, is a mystic. But he is not a personal mystic. He approaches the mysterious not aching for some touch that will illumine his own life and its problems, but he approaches it on behalf of his fellow men. The personal mysticism that brings beatitude to so many mystics of both East and West is ecstatic and well-nigh unintelligible in its reports. Einstein is a mystic in the sense that he approaches the mystery non-personally, seeking a truth that has no personal results, serving as a disinterested instrument for the revelation of that which is universal in its nature and universal in its application. His experience is non/ecstatic and intelligibly reported. He lends his skills and trained faculties to the translation of the As-Yet-Unknown into the Known. Dean Inge writes that "the great mystics have had little of ecstasy",

it is the ascetics of the cloisters who have brought themselves into pathological conditions as a preliminary to trance and who know first "the dark night of the soul" and later the ecstasy of personal beatitude. "Of this, the philosophic mystics, the disciples of Plato, have been free." The experience of the philosophic or scientific mystic is illumination, not ecstasy, and it is of this that Dr. R. M. Bucke made a study, following upon his own experience of it. He gave us the first detailed case history, from the point of view of the scientist, of illumination and its results.

As Dean Inge writes. "Almost all our guides are agreed that it (illumination) comes suddenly like a flash of light." At one glance, so to speak, the illuminato sees and understands the nature of things, and out of the experience brings a dynamic faith and also a dynamic idea which belongs to the field of his own work. Dr. Bucke was seized with the idea that the next step in emergent evolution was a new degree of consciousness for man, with its biological and social implications. After his own experience in 1872, he spent several years working out a theory of man's moral nature which he embodied in addresses given in St. Louis and in Washington in 1878 and 1879 before conventions of medical men. But he worked altogether for nearly thirty years on the research into the growth of a new faculty in man before he published *Cosmic Consciousness* in 1901. It is still widely read in many lands and by people of many tongues. It contained the case histories of many great creative persons and provided an essential clue to the development of scientific humanism. He foresaw that the man of the future would make use of the new faculty without the phenomenal

experiences of the pioneers of the race, and that the resultant insight into the real nature of man and the universe would change our forms of society. He foresaw discoveries that will literally create a "new heaven and a new earth."

Whitman was not only one of the subjects of Dr. Bucke's research, he was his friend. Bucke shared Whitman's vision of the future. Whitman's seed-idea was that the race on the American continent was to be spiritual and heroic, he devoted the rest of his life to the forceful statement and restatement of that idea. His theory was "produce great individuals, the rest follows." His great individual was one who had recognized and accepted his own "deific identity." For Whitman, the essential principle of democracy lay in this faith and conviction that every man had a "deific identity," and he believed that to recognize it in oneself and in others was the first step toward the democratic attitude to life. This idea of deific identity must come first. "A moral and spiritual idea must subject all other parts of democracy with remorseless power." Deific identity was the source of all man's creativity and moral values. He believed in the capacity of men and women to respond to greatness and in so doing the individual became "a full-sized democratic man." Equality, in his view, was the equal right of each one to recognition of his deific identity and the true freedom that confers. All men have an equal right to the creative way of life and to the pursuit of their integrity; the conditions which ensure the survival of these are basic in democracy.

"He believed," writes F. B. Housser, "that the fact of

unity would one day be scientifically demonstrated and that the golden rule would then be no longer a mere precept but a simple reality." Democracy was to him the metaphysical basis of the modern spirit.

III. RELIGION AND TRUTH

True religion is always in the hands of those who are most faithful to the service of truth. Even though an institution may profess to be a religious institution, if it is not whole-heartedly and unreservedly serving truth, if it hinders in any way the realization and application of truth, if it nurtures old errors, it is not the home of religion. On the other hand, no matter what an institution is named, if it respects and serves truth, disinterestedly, if it has developed techniques and disciplines for identifying itself with the expression of fundamental truths, in that institution is the religious spirit. Religion should provide a psychology by the disciplines of which an individual can train himself to raise his mind through the levels of instinct, reason, intellect, and abstract mind to the intuitive faculties, so that he may look upon the face of truth with clear and unimpeded eyes, in whatever field his search may be set. There is no reason to believe that truth concerns itself only with physics or chemistry. The Mind of Truth is whole, and in it we may see whatever we will. There is truth to be discovered about the social sciences, about political administration, about the relationship of parent and child, of man to woman, of the worker to the state. There must be search for these truths as disinterested as the search for physical laws.

"There is nothing greater for a man to get nor more

majestic for a God to give than Truth," was one of the sayings of Plutarch. Something of this spirit underlies scientific humanism.

Einstein was once asked if he hoped for visual proof of relativity from the work done with a great new telescope of two hundred inches, then in the course of construction. He replied "Not the eye, but the spirit furnishes the proof of theories."

Sometimes when he sets to work on some new project, Einstein will say to an associate, "Now is this the way that God would do it?"⁵ Leopold Infeld has given us one of the most intimate pictures of how a pioneer mind works, a moving and tenderly humorous account of a great human being in the process of creating his forms for the fruits of his insight. "Certain it is," Einstein says, "that a conviction akin to religious feeling, of the rationality or intelligibility of the world, lies behind all scientific work of a higher order . . . This firm belief, a belief bound up with deep feeling, in a superior mind that reveals itself in a world of experience, represents my conception of God."

Many others have expressed similar attitudes to the nature of the intelligible universe. Whether physicist, priest, artist, teacher, philosopher, or worker with the soil, men who think clearly and freely and experience directly have come to feel that within the phenomenal world is a world of reality, activated by a universal mind with thoughts that are orderly and consistent, operating on universal laws which it will reveal to any man who approximates his finite mind to the infinite mind. To know the laws and intentions of that universal mind is

⁵ Leopold Infeld, *Quest*.

to become of like nature to it. Some call that the worship of God, and others call it the worship of Truth. But even in this world of finite affairs, it is only when two minds of like nature are *en rapport* with each other that an exchange of ideas becomes possible.

Any scientist, when he seeks the solution of a problem, knows that there *is* a solution, a law which exists universally and which can be discovered, sometime, somewhere, somehow. Rival scientists do not expect to arrive at different truths and then to contend for the superiority of one over the other. They know there is one truth, and the rivalry consists in the desire to be first to arrive at it and to express it with most clarity and simplicity, or with what they call elegance. Einstein (as do other men) believes that "the fundamental reliance on the uniformity of the secrets of natural law and their accessibility to the speculative intellect" is the basis of all discovery.

This is the faith and conviction underlying scientific mysticism. It is a mysticism reached by way of the intellect, not an intellectual mysticism, but an intuitive mysticism, intuition being a faculty arrived at only through the abstract mind. Scientific mysticism is the mysticism of those whose faculties are fully developed to the point of recognizing and respecting universal laws. "Law is the unshakable order of the universe forever," says Whitman. "Strange as it may seem, we only attain to freedom by knowledge of and obedience to law."

IV GENIUS AND UNIVERSALITY

It is a sign of spiritual poverty in the race when society has to depend on the thinking and intuiting of the past.

When science or religion or art become academic and dogmatic, they are starved and impotent. But wherever there are intuitive minds, there is incipient religion. If men turn from an impotent religion and pin their faith upon a creative, dynamic science, they are not turning away from religion. They are turning to it, as naturally as a flower faces the sun.

Revolution seems to spring from two sources

- (1) The desire for freedom
- (2) The desire for truth

These are twin sources, and they should both motivate every revolutionary tendency, objective and subjective. We have so far been fighting for freedom. Now we must realize that to win our freedom we must fight for truth. Never forgetting that the desire for truth is a deeply religious instinct in man and that when we come to fight for truth as well as for freedom, it will be spiritually expressed and may generate the collective power to overcome the subversive influences of those who, even in the heart of our organization to fight for freedom, plot to prevent us from fighting for truth.

Western science of the nineteenth century was rooted in materialism. In the excitement of its successes, it discarded as unbelievable anything that could not be put into a test tube or under a microscope. But because a search for truth was the motivating energy of its research, it soon drove through matter into the intangible and the invisible, and into realms of being which were unbelievable. Archibald Henderson, in *Contemporary Immortals*, writes

The miracles of contemporary science herald and summon

a "renascence of wonder." . . . The miracles of the scriptures were miracles of the senses, of sight and sound and touch. They were the outward and visible sign of an inward and spiritual grace. The Word must be made flesh and dwell among us before it might be accepted as Truth. The miracles of modern science are miracles of the invisible and the intangible. I had almost said, the occult Science asks as great a feat of the spirit as religion ever dared to ask. . . We are asked to accept the existence of forces unseen, the imponderable, and the unproven. No one has ever seen an electron, an Angstrom unit is far too minute for measurement by a scale held in the hand, computation tells us that radium crystals emit tiny explosions at the rate of three hundred and sixty thousand per second, the enormous gravitational force of the companion of Sirius is fortunately beyond our ken. The imaginative scientist of today imposes as his first condition the voluntary abdication of "common-sense."

George W. Gray, writing on *No Hitching Posts*⁶ said "There are no forces. There is simply matter in motion through space-time, and matter itself is described as singularities in space-time. As these singularities—the stars and planets, for example—move through the all-surrounding medium, they affect it . . . Particles affect other particles, planets affect other planets, not through any mysterious attraction but through the inevitable distortions of space-time they produce."

The relativist assumes that all knowledge of the manifested world—and that includes man—is of and through relationships. Mind is the means that knows relationships. We contact the tangible world with our sense organs, and perceive objects and events, but the mind provides

⁶ *Atlantic Monthly*, February, 1936

the bridge from object to object, event to event. It correlates and synthesizes and gives meaning to these fragments. Mind, in this sense, is analogous to the continuum, the matrix, in which all manifestation takes place. Mind can conceive of relativity because it partakes of the nature of space-time, in which relationships are established. As this new conscious knowledge of relativity sinks into the unconscious, the race will become normally global-minded, planetism will become part of the normal conditioning of men and women from childhood on.

When a finite mind approximates even fleetingly and rarely the universal mind, we call the action genius "Genius," says Archibald Henderson, "is superlative excellence in the field of thought or action or both. It is capacity raised to excessively high power. The genius is not a freak; he or she is the supremely normal individual, with the full use of natural powers. Those who are not geniuses are abnormal, imperfect in capacity, maimed in valued senses, deficient in important attributes which have remained undeveloped. The genius is very much like the average man—save for some incalculable modicum."

Religion should, when it is true religion, be devoted to furthering man's progress towards *totality*. The incalculable modicum is the capacity for universality set free. Scientific humanism would promote the conditions of life in which men would be liberated—not merely as social or economic units, but as men capable of universality. Such men would keep flowing freely and constantly the sources of truth. If some such spirit of universality underlies our post-war planning, it will alter the whole future of man.

V. UNSHACKLED IMAGINATION

In this magnificent enterprise of rebuilding the world to achieve a planetary universality, the greatest tool of post-war planning will be man's creative imagination. When imagination is properly used, it is humanity's most powerful weapon for recreating society. When it is improperly used or not used at all, its mal-use or non-use is responsible for many of our problems, conflicts, and frustrations.

What the world needs today is someone to evoke the manipulative imagination of the creative leaders to inspire intelligent followers. Millions of people are reading and hearing uncounted dozens of rapid summary and survey programs—on the radio, in the newspapers, in study groups, on platforms, at the movies—everywhere. But the net result does not add up to anything meaningful. We suffer from a lack of imaginative interpretation. Instead of vision and hope, we languish in the doldrums or squirm with unrest due to fear of a breakdown in the world's financial machinery, or of some other disaster which will overtake us. Here we see the malfunctioning of imagination. When someone like an Einstein comes along telling us prophetically that *if we could dissolve the psychological barriers, the production-distribution problems would vanish*, then the bankers and professional economists, with their solidified mental patterns, tell us such persons are amateurs and don't know anything about economics.⁷

⁷ See *The Tyranny of Words*, by Stuart Chase, for an application of semantics to economics. Luther Whiteman's article on "Verbalization in Finance," appearing in the *Papers from the Second Congress on General Semantics*, also deals with this topic.

If we could dissolve old habits of thought and free man's imagination, we could emancipate the world from ball-and-chains economics and politics. A great visual drama, a play on an immense scale, might lift us up and stir our perceptions, so that we would feel ourselves as actors on a stage as big as the world itself. We might imagine a coronation ceremony for Global Democracy (as we describe it) making the symbolic world-beginning of the reign of universal humanism. Every movie house or every home equipped with television would become part of the great cathedral, each a new cathedral center, each spectator a participant in a great communion of faith and free will.

Taking light as the oldest symbol of ethical and spiritual systems, we would use the movie cathedrals as community centers—each a Plato's cave of shadow play—working through an alchemy of light and color, shapes and sounds, to produce a space-time drama of our planet, as the social analogue of Minkowski's space-time continuum in geometry. We would portray the whole pageant of man's history up to the moment of the crowning of the democratic triumph. Using millions of television sets in homes, and a central clocking broadcast to act as a universal drum for movie cathedrals and homes alike, we would build up a tremendous stirring through all Europe, all Africa, all Asia, and the Americas. This gathering of the energy of humanity through the portrayal of an all-world drama would precede the greatest industrial, financial, and cultural activity of all time.

The dissolving of the barriers and the breaking down of walls between men which would accompany this would carry over into our private lives and alter our

mental patterns. Is it not Emerson who somewhere quotes an antiquarian as saying that Stonehenge is God's scheme for the world? This reminds one of Sheldon Cheney's statement that the coming feature of housing will be the reduction of opaque, fixed wall sections, so that the entire world becomes our movie screen, and we sit in our glass houses by the sides of the roads friendly to man. The Stonehenge walls then expand for man, and all the world becomes a stage, with the sweepaway sliding off into the huge circle of man's horizon expanding to global proportions!

CHAPTER VII

EDUCATION AND POST-WAR PLANNING

Recently George Bernard Shaw glanced into his crystal ball for a vision of coming events and then informed the rest of us of what was in store for mankind. When the war is won, he foresaw, we shall dance in the streets for a week. Then we shall be demobilized and thrown back into the labor market to find work, if we can; if not, we can help to swell the ranks of the millions of jobless. Socialized plans for rebuilding bombed cities will be pigeonholed. The League of Nations will be restored and ignored as before. There will be a Hang Hitler election, after which the Fuehrer will not be hanged. And so it will go, according to Shaw. Except for the "unexpected and unintended things that war always achieves," we shall all return to the old practices and ways of thinking that characterized the decadent society of the past.

If education in this war-smitten world has any great objective, it would seem to be precisely that of preventing the fulfillment of this pre-vision. If, as Gerald Heard says, man's civilization is the shadow cast by his evolving consciousness, our economists, politicians, philosophers, and educators generally should already be mentally on the other side of this war, prefabricating the global "house of tomorrow" into which a dispossessed humanity must move when it leaves its present habitation. In

other words, the goal of education in the present juncture will be to assist us in accomplishing what we failed to attain after the First World War, namely, win the peace which followed the cessation of armed hostilities. Indeed, the working out of such a pre-peace blueprint might well hasten the victory, as well as help prevent a confused and frustrated civilization from slipping back into the dismal world of the gloomy Thirties.

The view that education should even now be preparing us to envisage the outlines of a post-war society of nations is not shared by all who are concerned with the functions of education in the present emergency. There is a point of view in contrast with the one above sketched. It starts with the basic assumption that during the war only those subjects shall be studied by students that directly contribute to winning the war. The implications of this proposition are then developed into the following consequences

(1) Today and for the immediate future, our educational institutions should devote their time and energy to teaching more physical science and less social science.

(2) We educators should not waste time on long-range, post-war planning courses. Any study, whether in the social sciences or in the humanities, which will prolong the war by one hour should be curtailed or abolished.

The argument here is that since post-war reconstruction study is taking time and energy away from the study of military science, it makes us less efficient as fighting units, and thereby contributes to the prolongation of the war. If, as a result of the necessary revision of the educational program, the liberal arts colleges are

wrecked "for the duration," that is very unfortunate—but it is the price we must pay for survival.

In commenting on this point of view, it must be recognized at the outset that here is one of those places where the thing we face is not a theory but a situation. There is now little that the colleges and universities can do about it, even if they don't like the conclusions. Those institutions of higher learning that are selected by the armed forces to carry out types of education set for them by the training program are co-operating cheerfully, and they count themselves fortunate in having soldier-students available to fill up the courses of the curriculum approved by the army and navy.

There is danger that the momentum of the new set-up, however, once it begins to function smoothly, will carry it beyond the original objective. When the original basic proposition is expanded into further consequences, educators have an obligation to adopt a more questioning attitude. The further consequences we have in mind may be stated in the following proposition *The education we require today and for the period of the war emergency should also provide the pattern for education in the post-war period.*

There are several possible justifications for this thesis. The first is provided by the argument that the so-called peace-time period will be really an era of armed truce, during which period the United States will play a major rôle in policing the world and maintaining international order. This armed truce theory can become a sinister force if it is supported by some form of resurgent Yankee imperialism. The same picture applies to the British Commonwealth and its wartime educational problems,

and also to a possible resurgence of British imperialism. Another possibility is the development of some form of Anglo-American aspiration to world supremacy. In this respect, the Western Powers had a good example set them by Chiang Kai-shek in the statement that "China has no desire to replace Western imperialism in Asia with an Oriental imperialism of its own or of anyone else." Yet if nationalism or imperialism has a rebirth after this war, educational systems stripped of the humanities will play only too readily the rôle of educating for technical expertness and not for enlightened thinking.

A second possible justification for such a doctrine, not of necessity associated with any psychology of nationalism or racism, is found in the view which may be called the "technological society" formula. According to this view, the kind of training necessary to "win the war"—namely, mathematics, physics, meteorology, and the like—is also the kind of training that will be required to keep a peace-time society functioning smoothly, because in the future society machines will play a dominant rôle. Apparently, in a technological world run by machines, we must all become machinists. In the future every housewife will need to understand physics and chemistry, just as today we need women, university-trained women, who are skilled in welding, riveting, and so on. After the war "Rosie, the Riveter" will receive a university education and be transformed into "Rosalinda, the Robot Rectifier!"

Our own view is that it would be a great mistake for university administrators, the general public, and the state legislatures which appropriate the funds to the state-aided institutions to encourage, or even acquiesce in, the

curtailment of interest in the fields designated by the terms "social sciences" and the "humanities." To get the argument into more concrete form, let us turn to a specific situation. Recently one of the authors received a carbon copy of a letter sent by a young man to his selective service board. He writes his board: "I have continued my education, even under the present war conditions, because my sincere convictions are (1) that the present apparent shortage of technical production workers and soldiers will be in no way comparable to the shortage of teachers and social leaders after the war, and (2) that the final shot fired in the present war will be the starting signal for the greatest struggle the world has ever seen to preserve, defend, and extend the human values of our democratic order." Even though we are under the considerable pressure of military requirements, in the light of the present point of view this young man's deferment should have been continued.

The problem of maintaining institutions for such individuals to study in will become a more difficult one as the war proceeds. But the faculties and facilities of our colleges and universities, liberal as well as technical, should be held together so far as possible during the war. Following the termination of the war, they would then be prepared to take in the new influx of students that can be expected. In the meantime the faculties of such institutions as are not self-supporting should be put on the status of research professors (with the financial aid of funds appropriated by the Federal government), their salaries paid while these teachers carry on studies in semantics, social reconstruction and integration, and other similar urgent problems.

One may well entertain the suspicion that those who doubt the values of the humanities and the social sciences in war time do so because they have their doubts about the values of these subjects in time of peace. If, on the other hand, it is admitted that sociology, political science, economics, psychology, semantics, anthropology, and philosophy have their values in preparing students to live in and help recreate a peace-time world, is it not obvious that these studies must also have their values in time of war? If, therefore, it is urged that enlarging the scope of education by the inclusion of non-military subjects may prolong the war, or even lose it for us, one may properly raise the question: *Who knows but what the failure to maintain education in the social subjects may not do the same thing?* Winning this war is as much a matter of making correct political decisions as it is of having the best military training for the armed services. If this war is a battle of ideas, a psychological warfare, the development of social intelligence in our democracy may be just as important as training men to pilot Flying Fortresses. When one contemplates the economic-political reorganization that the post-war period is likely to call for, it becomes clear that great social vision will be in demand. If men of good will cannot reconstruct their world so as to bring into being a broad program of social reforms, there is little hope of any kind of complex and integrated social order, democratic or otherwise.

But while we are thus defending the values of the social studies, this does not mean that we cannot find any defects in what we have been doing or how we have been doing it. There are many reforms one might propose in the methods and content of higher education in

the United States. Some of these we shall have occasion to consider as we proceed. For one thing, as we look ahead, it becomes clear that one of the most pressing needs which is going to develop will be the demand for additional courses to keep abreast of the new requirements of a rapidly changing society. The most obvious example of the approaching need is the call for courses designed to overcome the cultural provincialism of our vaunted Western culture, which until now has ignored the contributions of Oriental peoples to world culture.

If, as now seems amply demonstrated, we must prepare ourselves to think and plan on a global scale, certain obvious steps should immediately be taken to acquaint our citizens with the values, ideals, and structure of Oriental cultures; for example, the religion and philosophy of India, Chinese history, politics, and philosophy, and so on over the whole panorama of Eastern civilization. Only in this way can we balance the lopsidedness of our European-American civilization and understand the kinds and conditions of men all over the world, people with whom we must in the future co-operate in building the new World Form. If we are ever to create a universal civilization, a World Federation of United Nations, we shall have to find a way to resolve our global war into a global peace, make it secure through the supporting structure of global democracy, and perpetuate it in time through a global education.

This view that education should help us formulate and disseminate a common pattern of culture to be irradiated over the world surface does not meet with universal acceptance, even among the educators of our democracy, where, as one might suppose, agreement on such matters

should be relatively easy. In the eyes of the opponents of the view of education we are here urging, "democracy" apparently means a kind of cultural laissez faire with respect to the ideals and practices of other nations, and we must respect their right to choose their own educational, political, and spiritual institutions and mental patterns.

To those who defend this chaos-producing liberalism, the poisoning of the minds of the young by the techniques of the Fascist States is to be regretted. But we of the democracies must not step in after the war and, in the interest of what Henry Wallace terms "psychological disarmament," superimpose on these conquered people our own conceptions of sound education. As one of these educators, Dr. Walter M. Kotschnig, sees it,¹ we must avoid what he regards as the dangerous misconception behind the assumption that American methods and views are to provide the pattern for the coming European education. Dr. Kotschnig holds that it is foolish to think that any useful purpose could be served by our working out a "master plan" of education. As he puts it "Even if, for the sake of argument, we accept as a fact the doubtful suggestion that our educational ideas and methods are the best possible for our own people, we must realize that nothing would be so fatal and so certain of failure as an attempt to force a common cultural pattern upon Europe or even to propagate particular educational methods because they have proved effective in the United States. The very starting point of educational reconstruction is the recognition of cultural diversity."

¹ This view is expressed in an article in the *New York Times* on the topic, "Tells America of Job Ahead," December 13, 1942.

Now this argument that "we shall be most effective in the work of educational reconstruction if we rid ourselves of all messianic complexes," has a certain plausibility, but in spite of its seeming reasonableness, we believe it is fundamentally unsound as a viewpoint for the new global world into which we are moving. However, before coming to grips with the basic point at issue, let us refer to one other argument, along similar lines, which presents the same argument in the field of politics.

Substantially the same thesis is argued by Lawrence K. Frank² in an article in which he pleads for the recognition of this cultural diversity. He starts out with the observation that the idea of a world order has haunted the dreams of man for untold centuries. As he states: "There have been innumerable roads to world order offered to mankind, but each proposal has demanded acceptance of a particular religion, philosophy, political organization, or military power of the proponent, and abandonment, if not utter destruction, of all other religions, philosophies, political organizations, and of independence." According to Dr. Frank, if we are genuinely concerned with the establishment of a world order, "the crucial question then is how far does any scheme or program for world order recognize and accept the cultural diversity of mankind as the fundamental, inescapable basis of order."

And what shall we say about this apparently generous plea for cultural autonomy? It is obvious that Dr. Frank and Dr. Kotschnig are both interested in preserving cultural diversity, and thus seems commendable—up to a

² See the article, "World Order and Cultural Diversity," in *Free World*, Vol III, 1942, 1-4.

point! But "freedom" is always within a framework of stability, and we must be concerned with the structural principles which make possible that "free world." Evidently what we want is as much cultural diversity *as is consistent with the framework of international relationships necessary to maintain a lasting peace, social justice, and trade and commerce in this world.*

The problem we are here concerned with is really the problem of tolerance, set in the broadest context we can now recognize. On other occasions one of the authors has dealt with this problem of tolerance of viewpoints and institutions. The guiding principle then laid down still seems applicable.³ As was there stated. "The gist of the theory I am defending may briefly be summed up in these two dicta (a) we need not be tolerant of any doctrine that strikes at the roots of the principle of toleration; and (b) any doctrine that renders further growth and social evolution impossible is condemned as a violation of the right to think freely, which is an essential of a progressive society. In other words, we are under no obligation to be tolerant of intolerant doctrines . . ."

As the reader will note, applied to the principle of "cultural diversity" this means that we cannot appeal to the principle of tolerance when we are dealing with economic practices, political institutions, or religious patterns of culture which stand as obstacles in the way of further social evolution—which now means towards a more complex global society with a universal ethics. As Henry Wallace points out, the situation here is analogous to what the original Colonies confronted when they faced

³ See the previous volume, *A New Earth and a New Humanity*, by Oliver L. Reiser, 1942, pp. 204 ff.

the question of the federation of the separate states into these United States.

In the United States the principle of "states' rights" (cultural regionalism, to use Wallace's term) has been supplemented with the principle of federalism, wherever the good of the whole is not to be sacrificed in order to satisfy the supposed interests or needs of any special class, economic, political, or religious. And just as it has been necessary to establish laws which restrict the "rights" of groups wherever they conflict with the common good, so in the world of tomorrow a similar extension of federalism—an over-all economic-political-ideological planning—must be accepted and acted upon. For example, within the United States we do not grant to religious sects the rights of cultural autonomy (or "diversity") in the matter of spreading contagious diseases. We have many rules of sanitation and public hygiene, resting upon firmly established principles of medicine, which prescribe *for all of us* the limits of "individual rights." We would extend some of these principles to global proportions and deny to any group (nation) the right to practice doctrines which plainly contravene firmly established truths of science—whether inside or outside the field of public hygiene. For example, in globalism, we deny to the followers of Voliva the right to teach children the doctrine that the earth is flat. By the same principle, we would take away from states the right to set up anti-evolutionary legislation, if it can be shown that the doctrine of evolution is the best generalization ("hypothesis") we now possess in the field of biology.

In a similar manner we would deny to the Nazis the "right" to corrupt the youth of Germany, to the Japa-

nese the right to cultural "diversity" with respect to Japanese religion which supports Emperor worship and a feudal system of warlords who can menace the safety of the world at any time they see fit. And so on. Many illustrations are at hand, but we have cited enough examples to illustrate the principle. Whenever a doctrine, custom, practice, or set of folkways contradicts the best interests of universal humanity, because it makes impossible the international co-operation, the political-economic-ideological synthesis of global democracy, this pattern of belief and action must yield to the higher principle of the universal ethics.

To say, as one reviewer has in his comments on the program of scientific humanism, that asking the world to adopt humanism is like asking the world to adopt Methodism, or any other ism one may recommend, involves a gross misunderstanding of the argument for humanism. This ism seeks a common basis for co-operation for all human beings, but recognizes that all practices and beliefs that interfere with the establishment and operation of this common basis must go. They must go, not because there is some one eternally "true" and revealed ideology, but because they are incompatible with accepted knowledge *as established by the sciences, social, physical, and so on.* The method of science is superior to the methods of authoritarian religion and politics because the method of science contains within itself a procedure for discovering and correcting its own mistakes. For this reason the advocacy of humanism is not comparable to the advocacy of Methodism, Presbyterianism, Catholicism, Christian Science, or any other variety of orthodox belief.

Of course the basic pattern for the coming universal

civilization cannot be instituted all at once. Doubtless there will have to be an order of priority established in the cultural changes necessary to secure world integration. Where there are controversial cases, or borderline cases, where it is not clear whether such cultural diversities are compatible with a global civilization, we should lean in the direction of too much rather than too little tolerance. That is to say, there are already so many clear cases of changes that must be made, the making of which is enough to keep us busy for a long time to come, that we can leave the controversial cases to be dealt with when we have more leisure.

We repeat, this world reorganization along global lines cannot be done overnight. Utopia will not be ushered in at 3:00 P.M. tomorrow. The problem of education is to help us work out the pattern for this global society and then gradually disseminate the master plan of reorganization—from the bottom up and the top down, from the outside in and the inside out—making effective this plan for universal humanism for mankind. In this business of re-educating ourselves and the rest of the world, educators need to remember that “words are not enough.” The thought patterns of the global society must be made flesh, incarnate in the structure of human relationships. Only thus can humanity free itself from its own social karma and be washed clean of man’s inhumanity to man.

EDUCATION FOR GLOBAL MINDEDNESS

Today the United Nations are engaged in the enormous task of fighting and winning a global war. Under the stress of this supreme effort, a great strain is being put on all the institutions of democratic society, greater than they have ever been called upon to withstand. Among the institutions now subjected to pressures from all sides, we find our institutions of higher learning, the colleges and universities of the United States. In the past, these educational institutions have been perplexed by the problem of steering a sane course between the demands of reactionary political and religious groups on the one hand, and the ultra-radical economic groups on the other hand. To this difficulty of long standing is now added the problem of survival in the face of decreasing numbers of students, restricted incomes, and so on.

If, as the war continues, it turns out that a considerable number of the liberal arts colleges cannot keep going on their own, and the Federal government is unwilling to come to their assistance, does this mean a cultural black-out for the country? Not necessarily. We have the tradition of the wandering seers and sages of long ago who spent their lives going from one mystery school to another, seeding them with thoughts. The universities evolved out of such informal schools, and they may have

to return to society some part of what humanity lost when institutionalized education replaced the less formal type of education. In that case the public would receive a nucleus of inspired teachers, with saddlebags of books for libraries and soapboxes for platforms! But this return to a more primitive type of education could not, in our complex society, take care of all our educational needs.

This situation—the dispersal of the teachers of the more advanced education—becomes particularly disturbing when it is coupled with a general “retreat from reason” all along the cultural front. Recently an informant with numerous friends among the intellectuals wrote one of the authors that some of these “liberals” had already taken to the woods, while awaiting what they thought was to come—the collapse of finance-capitalism. No doubt there is a certain degradation of intellect going on during these days of the death throes of an old order. If the common people of our democracy are not to succumb to a similar subservience to the compulsion of events and take to the woods, hibernating mentally while there is yet so much work to be done, it will be up to those who still have connections with our educational institutions to prevent the threatening cultural debacle. This may well be humanity’s last big chance to salvage and rebuild society, thus rescuing the past from futility and securing the future against a repetition of global disaster.

Some persons seem to think that after we have successfully accomplished the objective of our present stupendous job—winning the global war—we can then settle down again, returning to all our old ways of doing

things. But the simple fact should be clear to all that after the military victory has been won, we shall still be confronted by problems such as no age or race of men has ever faced before.

To solve these problems, it is not enough that we build and equip the mightiest mechanized forces the world has ever known. We must be prepared to enter upon a period of equally heroic mental reorganization so that we can successfully carry through the large scale social readjustments essential to the building of a better world. To prepare ourselves for the vast changes in our social structure which the creative age demands, we must first of all start rebuilding the minds of men.

Psychologically, under the compulsion of political necessities, we are being transformed from an infantile isolationism into an adult internationalism. This means that the biggest job now for those of us who remain on the home front is to refashion the inner life of all of us so that when the time comes (and it is already close at hand), we shall be prepared to construct the economic-political machinery necessary to provide the framework for a universally humane world order. The prelude to this mental rehabilitation is the cultivation of new attitudes and new social perspectives to replace the outmoded policies and views which are entrenched in our social institutions and individual habits of thinking.

Now the creation of new patterns of thought and new attitudes is fundamentally a problem of our educational system. It is the problem of introducing new directions and new techniques, of setting up objectives never before contemplated by educational institutions. No mere tinkering with the existing curriculum will suffice. The

time for starting the consideration of these changes is already upon us. We cannot postpone the issue.

If we accept the principle that we shall achieve at the peace table no more than what we fought for in battle, we are faced with the necessity of hammering out the shape of things to come in the very heat of the present conflict. Dr. Arthur E. Morgan has pointed out that we humans are always torn between the need to determine where we are going and the need to be on our way. If we spend too much time trying to develop blueprints of our ultimate ideals and objectives, we will make little immediate headway. But then the man who is always in such a hurry to get there that he has no time to find out where he is going makes no real progress either. As Dr. Morgan puts it, wisdom lies in knowing where we are going and in being on our way. That is why the educator's plea for calm reflection is no less insistent than action's demand for immediate practical results. Thought untested by practice is empty, but action unguided by theory is blind. Theory and practice must be harmonized. One without the other will not do.

Educators face this problem of integrating thought and action in its most critical form in the pressing demand for the specialized skills necessary to prosecute the war. This leads the military authorities to demand specific curriculum changes in our schools. Yet the over-all picture requires that we clarify our ideals, our way of life, and our ultimate objectives, as Professor Pickens Harris has expressed it. We dare not emphasize the one at the expense of the other. Or as Professor Harris states the matter, the full discharge of our educational responsibilities requires that we keep a balance between the two.

areas of need, or, more accurately, that we strive for harmony and interaction between them.

What then shall be the direction in which educators must move as they try to satisfy these multifarious demands, while yet striving to maintain intellectual integrity, if not financial solvency, in this highly uncertain world? The answer we are going to give to this question will be arrived at in a somewhat roundabout fashion. In order to place ourselves in proper perspective with reference to our planetary abode, we begin with our earth as a globe swimming in space.

Such a perspective is provided for us by Major William H. Wenstrom in his book, *Weather and the Ocean of Air*, dealing with a subject which by common repute is a topic discussed too often. But the author of this interesting book, like a modern Jules Verne, dreams of a time when man has invented a rocket that will enable him to escape his ancient place of bondage. In that day, space-eating men will sound the depths where the blue deepens into the violet, and the violet turns to darkness, and "against the blackness of empty space planets and bright stars shine out with steady brilliance like enormous and remote lamps . . . Against all this infinite pageant the giant sun glares blue-white . . . and far beneath is the broad earth, expanded to new horizons, haze-wrapped and cloud-littered . . . evidently a part of a greater cosmic scheme, viewed for the first time from the mythical slopes of Olympus."

To place one's self, in this manner, outside the space and time of our familiar landmarks, seeing the world as a globe swinging in space, yields a perspective which enlarges the horizon of thought. Indeed, quite apart from

the philosophical expansion of mind which results, it is quite essential, for practical purposes, for us to visualize our globe as if we saw the world from afar off, above the earth's north pole, for example, if for no other reason than to keep in mind the time-space relations of our Allies helping us to fight a global war. Just as the readjustments which are required to attain a polar view of the globe will help us fight a war, so in the days to come, the period of post-war rebuilding, we shall need a similar extra-mundane emancipation. An enlargement in our perspective of social relations is called for. A global war has precipitated a cultural crisis which can only be transcended by the establishment of a planetary civilization.

However, the foregoing planetary stereoscopic view, salutary as it is in the enlargement of our perspectives, suffers from one outstanding defect: it reflects a picture of the world as a static entity hung in space. A rocket-eye view of the earth does not convey to us the temporal span of our planet as a being with a history. As a creature of time, the living earth is an organism into which the effects of the past are written. In its earthquakes, the earth vibrates with the whole of its past. Geological memory reverberates in our present, planetary-political relationships.

Viewed in the dimension of time, our world can be telescoped into a series of geological eras stretching from the pre-millennial dawn of two billion years ago to the present social upheaval of an ever-upward struggling humanity. As Dr. C. Hilton Rice has so well depicted it, earth history is interwoven with a pattern of life, a woof and warp of vital threads which knit the floor of the earth with a streaming trail of protoplasm climbing up

from the sea below into the sky above—a fabric of living tissues crosswebbed with earth-history, culminating in a precarious pinnacle of evolution in the last era, a psychozoic age of Man. The earth-organism has built itself a tree of life, with a nest of sensitized cells—human personalities—in the upper branches, and now the bird-men of evolution have left their old haunts to probe the broader habitat of life, the earth itself, in all its dimensions of space and time, over all the seven seas to the last frontiers of its drifting continents.

Sweeping down the centuries of geological time, we arrive at our present great century, the twentieth, already scarred by the two world wars. Now history rushes us into the future with increasing tempo. The act of the drama which began with the Munich pact gains in momentum and suspense, and drives us ahead to a climactic moment, with the end yet to be determined. What will be the meaning of this tremendous play? There is a saying of Confucius to this effect: "With a mirror of brass you can adjust your hat, but with antiquity for a mirror you can predict the rise and fall of empires." Might not the great, climactic moment of world history come, not with the fall of another empire—this time with the collapse of the entire structure of world civilization—but rather in the appearance of something completely new in social evolution, a World Brain, a specific organ of civilization for mobilizing our diverse energies and unifying social purposes?

The supreme culmination of the outward-upward expansion of life and consciousness to global proportions must ultimately be a World Sensorium, a collective social organ which serves as a medium for receiving from

and dispensing to one and all—either that or the story of evolution is a tale without meaning, full of sound and fury, signifying nothing. The World Brain will be the functional organ by means of which individual man works with the brains and hands of others to produce the super-neural social synthesis which is Humanity. The biological forerunner of social synthesis is the central nervous system of individual organisms. Just as the cerebral cortex is the vehicle of the master reaction which regulates the diverse and otherwise conflicting biological reactions, so to achieve a similar global strategy for mankind we shall have to evolve a seat of intellectual-social dominance to harmonize our multifarious economic-political-cultural activities.

Where is this center of world co-ordination, the synthesizer of reactions, to be located? The answer is that the New Humanity that will emerge with the adult social organism will not be located in any one place. *The World Brain is a functional group.* But the World Co-ordinators who administer the directives of universal humanism, irradiating an over-all global democracy free from special frameworks of races, languages, religions, nations, and other geopolitical artifacts, will have a definite center. However, this is not the place to speculate on the proper location for a seat of intellectual-social domination and planetary synthesis.

What we are now concerned to establish is that this need for world-wide planning through an organization for transcending the segmental thought and structure of society sets the new direction and ultimate goal for education. After men have sufficiently recovered from the initial shock of the psycho-social cataclysm that has up-

set the stability of our social structure, we must set about taking the next step—developing through education for global mindedness a realization that the world is one and that all parts are interdependent.

We seriously propose that Humanity some day can become in very fact a biological-social entity. When one considers this organism-to-be in relation to an emerging world plan, it is as though one were “seeing double”—as though two sets of global planning were going on at the same time, one subjective and the other objective. These two are in no sense antagonistic, on the contrary, they are supplementary. The first is a matter of developing an intuition or feeling of the biological unity of mankind, and the second is a problem of translating this intuition of the oneness of humanity into a global-social reality. On the social side the problem of creating a “world sensorium” has been stated by Julian Huxley¹ in these terms:

Before humanity can obtain on the collective level that degree of foresight, control, and flexibility which on the biological level is at the disposal of human individuals, it must multiply at least ten-fold, perhaps fifty-fold, the proportion of individuals and organizations devoted to obtaining information, of planning, correlation, and the flexible control of execution. The chief increases are needed in respect of correlation and planning and of social self-consciousness . . . In respect of planning and correlation, we can dimly perceive that some large-scale organization must be superposed on the primitive system of separate government departments and other single-function organizations, and that this, like the cerebral cortex, must be at one and the same time unified and functionally specialized

¹ *Man Stands Alone*, Harper & Brothers, 1941

This is all very fine, provided we can visualize and elaborate the plan as a whole. If educators can evoke a group of sensitive individuals, capable of realizing a new approach to the world and can then work with the best of our scientists, they could span the gap between a vast, emotionally illuminated, subjective global group and an objective, purposeful, intelligent, and tireless outer world government, and give us that New Earth with its New Humanity. The scheme of H. G. Wells for a World Encyclopedia would help to provide the bridge between the two. Ultimately, both the subjective urge and the objective enterprise would coalesce, and there would exist a group of individuals capable of using new methods wisely and accurately.

That such an imposing program is not an "impractical idealism," but is indeed a very practical necessity if our world is to endure, has been argued by Waldemar Kaempffert in his Science News Review in the *New York Times*, August 30, 1942. Pointing out that the fourth article of the Atlantic Charter postulates access to the raw materials of the earth on equal terms to all nations, Dr. Kaempffert then observes that nothing less than a complete mobilization of science and technology is implied because the raw materials themselves are worth little without the technical knowledge and skill demanded for their extraction from the earth and their subsequent utilization. The attainment of this objective of the Atlantic Charter calls for a planned, global application of science to social processes. As Dr. Kaempffert states, this means that in the world to come science must be organized internationally, that the two hundred thousand research men—a considerable block of humanity composed

of the leaders of thought of every advanced country—must sink their nationalism, their prejudices, and their very emotional drives into the demands of a common cause. This concerted program, we submit, may well provide the scientific basis for the new world federation, with its universal ethics and global culture, for which the notion of a World Cortex supplies the philosophical framework.

This idea of a global civilization is the biggest single idea in the human mind today. There are many groping towards it, and the present effort is one such attempt at describing this new development in human evolution. Curiously enough, Hitler was one of the first to react to this new development in human consciousness. He represents the element in man which shrewdly anticipates and dreads the recognition of the planetary mind. He fears the Jews and persecutes them because he senses their freedom from nationalism. The forces he personifies know that once the global mind is co-ordinated and aligned into a planetary wisdom, the brotherhood of man will overshadow all the old principles of exploitation and the relative values of wealth, caste, race, and nation.

In the previous chapter, we spoke of some of the changes in educational approach that are now in order. That our suggestion concerning the necessity for new perspectives—global views—in human relationships is not a philosophical mirage, but a genuine reality, is borne out by the ideas expressed by Professor W. R. McConnell.² It is appropriate to end this chapter on global mindedness by quoting at some length from this significant statement:

² See his article in the *New York Times* on "War Spurs Geography Study," December 27, 1942.

Drastic changes are occurring daily in both the teaching and status of geography from the elementary grades through universities. The influence of geography in military strategy, war production, geopolitics, international diplomacy—even the proper interpretation of the daily news—is recognized by all.

The increasing emphasis on geography in institutions of higher learning is nothing short of revolutionary. . .

What will be some of the outcomes of this nationwide interest in geographical education? In the elementary school we shall witness increased interest in systematic instruction in the use of maps and globes. There will be expanded use of physical-political maps. They serve to accentuate place consciousness and spatial sense so badly needed by our citizens. .

At all levels—elementary and junior and senior high schools—courses in geography will lead pupils to think of oceans, straits, and other bodies of water as connecting rather than separating places. It will teach them to think of climate not as inches of rainfall and degrees of temperature, but in terms of crop production and human energy. Airplanes have so changed our thinking that the new geography will measure distances in hours rather than in miles.

Geography will break through the tyranny of national boundaries and teach our children to think "planetarily." At every level of learning the purpose of geographical instruction will be to make our children aware that we are becoming more and more an inter-communicating world.

Let those who say there is nothing new under the sun ponder well the wisdom of these words. There *is* something new under the sun—and that is the "new earth" which we are coming to see with better vision in its "true light" through a more complete perspective of Man-Earth interrelationships.

A SEMANTIC ANALYSIS OF DEMOCRACY

I

In the previous chapter we have urged that after the Second World War has been won, we United Nations will still be confronted by problems of a size and complexity far beyond anything the human race has yet been called upon to tackle. If civilization, as we desire it, is to be permanently rescued from the recurring disasters of the past, we must enter upon a period of reforming our mental patterns in order to be prepared to carry through the social reconstruction involved in the building of a better world.

If our world is to be rebuilt, we can no longer tolerate the condition of mental and social confusion which provides at least a partial justification for one writer's charge that vague words like "democracy," "spiritual," and many others are frequently used by speakers to cover the absence of any thought-out plan. It goes without saying that if we are to attain a higher level of social life which will replace the conflicts of the old order, we must do something to overcome the present semantic disorganization that sustains a system in which, as Lewis Mumford once claimed, business men can become gangsters, and gangsters can become business men—without changing a single essential habit of their lives.

Many persons today are profoundly hopeful that a new way of life may emerge from our generation's catastrophic conflict. Such persons can tolerate the prospect of the cumulative suffering of these years only because they look beyond the present to some coming vision of a better world, a dream or a plan that shall be born out of the agonies of mankind's struggle. What can be done about this writhing world in which you and I and two billion other people must live and move and have our being? Our answer, here again as before, is that this war "makes sense" only on the assumption that we are living in a transition period when our new ideals, new attitudes, and new institutions shall be forged, destined to bring into being a universally humane civilization to replace the one we are in process of destroying.

If man is to retain faith in himself, he must somehow validate his confidence that he himself controls the destiny of nations. But to prepare for that world of tomorrow which man alone can create, man today must start rebuilding his own mind. The prelude to any successful, large-scale readjustments is the *generation of new attitudes*, among which is the spontaneous eagerness to embrace the new patterns of belief and action which, without question, must replace the present outmoded policies and views. The plight of the world is such that only a theory and a program adequate to the needs of a new world can mobilize our energies and integrate our collective efforts into a program of broad cultural synthesis.

In words this is simple, but in deeds it will be anything but easy. Somehow we must learn to weave an entire new pattern of novel concepts into the existing fabric of our changing social structure and visualize the frame-

work of a world federation. Many persons will confess that they see little connection between the semanticist's dictum that language is the essential instrument of man's humanity and the doctrine of H. N. Wieman that "a magnificent humanity awaits upon a magnificent language"—yet the connection is there. All institutions of society express a set of meanings, which are sustained by a common language, and together all these constitute the semantics of the culture in which these institutions, folkways, and laws exist. Ultimately, therefore, the problem of salvaging our civilization is that of instituting a large-scale semantic reorganization, nothing less than the creation of a global semantics which shall transform our present political-economic hodge-podge into a coherent global democracy for a planetary humanism.

When we make this statement we realize that we are using the word "democracy" in an unusual manner. For us democracy is something more than a political concept; it represents a fusion of all our thoughts and actions—scientific, social, religious, and economic—into one supreme effort and program. The semantic transformation whereby we lift this concept out of the domain of mere politics into the realm of ethical-cultural aspiration is what we shall now examine and justify.

II

In recent years we have heard much talk about "democracy." We are frequently reminded of its many superiorities over the "totalitarian ideologies." This is as it should be relatively, the former is superior to its present alternative. But the danger of stopping at this point is

that some persons are likely to conclude that our democratic way of life as we have known it is like "normalcy" after the First World War—something to which we must "return" as soon as possible. A more enlightened view is that democracy ought to symbolize a dynamic situation which we must never permit to become fixed by any intellectual, "staining" technique. "Democracy" as we have it now should be thought of as a bridge—a semantic token and social symbol, covering the processes of experimentation and imaginative reconstruction whereby, through orderly processes of change, we constantly refashion our civilization.

The greatest menace to our "cashing in" on our investments in this war is that we may solidify our notion of democracy into a fixed thing and then idolize it as our "cultural heritage." The danger of such a view is that it encourages us to think of the institutions of government as final and perfect, therefore, after the war is won, all we need to do is "preserve" our way of life. To many of those who exercise control in our society, the "American way" is identified with the system of "free, private enterprise." For such vested interests, democracy must be thought of as synonymous with "capitalism," the "profit motive," and the right to the accumulation of "private property," and the like.

But if this is not the correct conception of democracy as the thing we are fighting for (as indeed we have already indicated in Chapter VI), what is the proper conception? What is the framework of this new society we should strive to create? How can this thing called "semantics" help bring it into being? The answering of

these questions is not easy, but let us at least have a try at it.

III

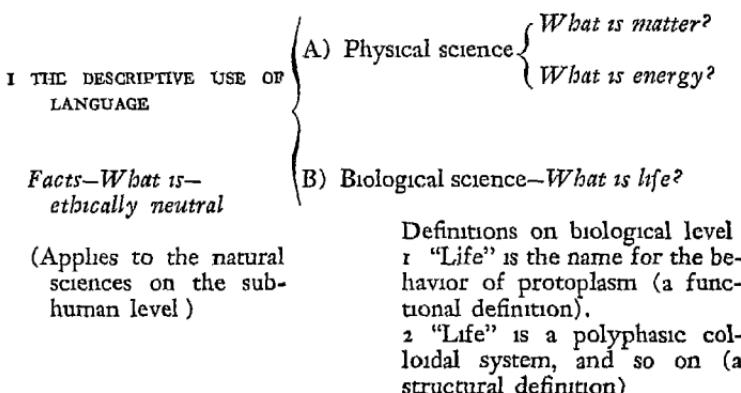
One value that investigations in the field of semantics may have in clearing up our ideas about controversial social issues is that semantic study calls attention to the fact that language serves several different purposes in life, and these functions are often interwoven and confused. If semantics did nothing else than bring us to a realization of the necessity for distinguishing these usages, much unnecessary misunderstanding and resulting controversy would be obviated.

In order to develop our thought, let us first turn to a classical statement of the function of language. In their well-known treatment in the volume *The Meaning of Meaning*, C. K. Ogden and I. A. Richards argue that language serves two main purposes, namely, (1) the symbolic use of language, and (2) the emotive use of language. The first use is said to be illustrated in the natural sciences, where the dispassionate pursuit of truth results in the accumulation of bodies of propositions which are verifiable in terms of the conformity of these propositions with the observed facts. The second function of language, its emotive use, is illustrated in poetry, religion, and much of philosophy, where the æsthetic factor may enter, and where it is impossible to test the truth of what language expresses. In passing, it may be noted that this distinction has been taken over by some of the "logical positivists," who argue that metaphysics is simply bad grammar, because it rests upon a confusion of language

as emotional expression with the claims of logical truth as found in science.

Now we think we may well question the validity of the distinction that Ogden and Richards seek to establish. For one thing, to suppose that "reason" and "emotion" represent separate faculties and that language can be used to express the activity of either alone and exclusively is to lapse back into the outmoded elementalistic psychology. We cannot agree that poetry, religion, ethics, and speculative philosophy are merely wish-fulfilment concerned with providing emotional outlets, whereas science is exclusively intellectual (cognitive) in nature and free from emotional incentives or coercions. Human experience and behavior are never entirely rational or non-rational, ideas are always emotionally conditioned, and emotions in man are always ideationally directed.

The distinction in uses of language we shall offer is based on what are called the *descriptive use of language* and the *creative use of language*. Here is the way this contrast is developed.



II THE CREATIVE USE OF LANGUAGE

- A) Social science—e.g., economics—
What is a “fair wage”?
- B) Ethics—What is “social justice”?
Here we are interested not only in
what a word *does* mean, but in what
it *ought* to mean

Values—What ought to be
(Applies to human level,
deals with values—normative science)

In this conception, it is held that social concepts are normative, are concerned with ideal formulations, rather than factual statements. Some social scientists protest, insisting that social concepts (and terminology) are *not* normative but purely descriptive. In the field of sociology, for example, where some investigators have investigated “criminal types,” it may be argued that such a concept represents a composite image of the various individuals comprehended by the “type” (in this case individual criminals), and this makes such concepts statistical averages.

Actually, we believe, this suggested example of a descriptive social concept is really an example of a normative concept, in the sense that we use a set of values (ideals) in deciding who is a “criminal” and therefore a proper inmate of a penal institution. In general, most of the ideas (concepts) we employ on the human level involve a “creative” element—thinking in terms of what we would like, thus going beyond the descriptive use of language. This is found in a beautiful way in Plato’s *Republic* where Socrates tries to settle the question, *What is justice?* Before he finally answers the question,

Socrates pictures for us a new conception of a perfect state which never before existed anywhere. In such an ideal city-state or *utopia*, as these imaginative constructions were later called, justice might be found. In such cases, it is clearly obvious that the concept is not a composite image or a common denominator of the individuals included within a class. It is not a law of behavior or statement of things as they are. *The concept involves a creative vision of what ought to be!*

The foregoing distinction in the functions of language leads us to the conclusion that there are really two types of semantics, namely, (1) the *semantics of natural science*, which is simply the much talked-about "scientific method," and (2) the *semantics of normative science*, with a methodology still to be developed. The first type of semantics (symbolization) gives us reliable *maps* of existing *territories*; here we seek to establish similarity of structure between bodies of propositions (*maps*) and the worlds of facts (*territories*). The second type of symbolism (semantics, or the use of language) aims to picture for us a world of ideals, *it gives us a map of a non-existent territory*. The creative use of language strives to express or represent an imaginative world, a territory-to-be, which the artist or creative genius tries to show ought to be brought into being.

Now, as we have stated, it is with this second world that the preacher, the politician, the ethicist, and even the social scientist are mainly concerned. Their problem is indeed a difficult one. How to evaluate social views and attitudes? How to choose among "ideologies"? How

to decide what is "good economics"? What is "sound political doctrine"? What is "desirable social reform"? So shot through is our very terminology that every so-called statement of fact is almost willy-nilly a value judgment.

There is here in the field of ethics (or value judgments) an inherent paradox: our ideals ("social objectives") *must come out of experience*, and yet, as ideals, *they go beyond experience*. They are not merely statistical averages or composite images, but intend to be creative in function.

For those of us who hold that the task of students of social science is to provide a semantic underpinning for a new cultural synthesis, a topological sociology for a universal civilization, this paradox must be faced and resolved. At the outset, the only guiding principle we have is the naturalistic assumption (as opposed to supernaturalism) that there is, and must be, some connection between the world of facts and the world of ideals—the latter must not go so far beyond the former that our world of objectives will forever remain the product of "impractical idealism." This means that interlocking structures for the semantics of natural science ("factual" investigations) and of normative science ("value" judgments) must be worked out. We must learn how to be able to "reason" and talk about justice, rights, living wage, democracy, and the like in such a way that we do not produce conflict in our world of meanings with resulting social chaos. Unless we secure intellectual-social integration (co-operation), semantic suicide is inevitable.

In our social intercommunications concerning the

world of ideals (what we want), our maps of the as-yet-non-existent territories must be sufficiently similar in structure so that we can reinterpret old concepts and put new meanings into their representative symbols (word structures). The suggestions some would make that a new terminology be developed to express new concepts of a topological sociology faces the objection that a new language does not provide the linguistic-cultural continuity necessary to orderly social evolution.

In order to picture the methodology involved in our creative technique, we propose the following schematism:

It will be observed that our philosophy of "scientific humanism" aims at an intellectual-emotional integration (or cortico-thalamic synthesis). It tries to unify the religious spirit—the sense of awe, wonder, and reverence and the attitude of worship—with the scientific temper and interest. Only such a unity of organismic functioning can redeem the modern world from the streamlined brutality of science (technology) as applied by inhuman leaders.

To show how such a formulation may lead us out of our present wilderness into the promised land of planetary utopia, let us return to the theme of democracy.

IV

Those who are familiar with the evolution of our society know that the traditional definition of democracy has been stated in terms of a nationalistic-capitalistic framework. It is based on a doctrine of equal civil rights for all free men (citizens of the state). These "rights" were stated to be the right to life, liberty, and the pos-

RESULT A PROJECTED WORLD OF IDEALS

A Political-Economic-Ideological Synthesis =
"Scientific Humanism"

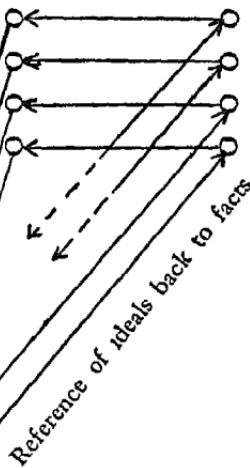
This is a socially reconstructed world in which Globalism becomes our objective. This map of a territory-to-be embodies the results of the use of "scientific method," "normative method," and the "religious spirit."

Q Q Q Q (Symbols of Global Democracy)

World of Secondary Symbols
 An ideal map of a non-existent territory, to be created through normative semantics.

World of Primary Symbols
 A descriptive map of an existing territory (a verbal description of present-day "democracy"). Using scientific method (semantics), we symbolize the world of facts discovered through observation

World of Primary Facts:
 This is the world of individual-social facts (on the human level) of existing "democracies."



session of property. Later on the "possession of property" was transformed into "the pursuit of happiness," and these civil rights were then extended to all races and social groups *within* the nation.

Today we are engaged in the adventure of transmuting the concept of democracy, so that it is coming to symbolize something more than a local (national) political phenomenon Eighteenth and nineteenth century liberalism ("democracy") was committed, theoretically and practically, to the laissez faire doctrine of economic individualism Now the newer view has already subordinated the rights of private enterprise to social restraints and needs. "Property rights" are being subsumed under "human rights." But it is not merely that "political democracy" is thus supplemented by a measure of "industrial democracy" The change is even more fundamental and far-reaching The nationalistic frame of reference is giving way to the more inclusive setting of international democracy, and capitalistic democracy is being transformed into the wider pattern of international economic co-operation Franklin D. Roosevelt's Four Freedoms really mean in effect a commitment to living in a world community, and this must ultimately socialize the "wealth of nations" In brief, we are *globalizing democracy!* What is most important in this process is that the concept is becoming something more than a political ideal—global democracy is quite properly taking on some of the characteristics of a religion. The intimate historical connection between political evolution and religious development, culminating finally in their merging into one universal culture-pattern, may be condensed into the following scheme:

Political Organization → Tribal Life → City State → Nation State →

Corresponding

Religious Structure → Polytheism → Henotheism → Monotheism →
 (Tribes of (Judaism, (Stoicism,
 Israel) Greek re- Christianity)
 ligion)

World State (no nationalism)

Globalism (scientific humanism)

We now see more clearly than ever that "political," "economic," "religious," "scientific," and "artistic" institutions and activities are abstractions from a total culture-pattern—elementalist fictions created by a more primitive semantics. The new frame of reference of global semantics will give us a universal civilization wherein these interests will be regarded as aspects of a unified field of psycho-social dynamics. This topology of humanity might well be recommended as a substitute for the elementalistic *Lebensraum* of current German geopolitics.

V

Our proposed unification of religious, scientific, and social thought into what we have termed a political-economic-ideological synthesis raises many questions. Perhaps the most interesting of these problems arises out of the two types of semantics we have presented. What happens to "truth" (as the scientist understands it), when science, religion, and art are fused in a synthesis in which normative semantics supplements the "ethically neutral" semantics of "scientific method"? Our answer is based on the thesis that at this point the traditional logic

which men have employed for over two thousand years, the logic of Aristotle, exhibits its inadequacy as a mold for the forms of the new civilization. We therefore come face to face with the need for a non-Aristotelian logic, as may be briefly indicated.

Aristotelian logic deals only with cognition—the intellectual faculty, elementalistically defined as something non-emotional in nature and function. But in the new global culture, where science (facts) and religion (morals) and art (æsthetic values) are fused, non-Aristotelian logic is called upon to serve three masters cognition, volition, and emotion, thus taking into account the intellectual, the ethical, and the æsthetic. Both facts and values, the truth-goodness-beauty trinity, must come under its sway. Traditional logic is concerned only with logical compatibility and incompatibility. Here a false proposition is inconsistent with a true proposition, and there is no middle ground in this time-honored, two-valued logic.

But this criterion, even if it were satisfactory for logic limited to the service of descriptive science, would not do for ethics and æsthetics. Perhaps, as H. F. Saltmarsh has suggested, what we need as a criterion is what may be called congruity and incongruity, a sort of general fitting in with the pattern. It is obvious that this admits of degrees; it is not two valued but multi-valued.

The test and measure of congruity must be more complex than plain *yes* or *no* compatibility (logical consistency); it must embrace all ethical and æsthetic principles. Further, it must take into account the entire situation—be thoroughly organic. Here is how it would operate. Suppose a playwright or a novelist is working out the actions for one of his characters he must make certain

that such actions are congruous, not only with the character already depicted, but with the character in the particular surroundings in which he then is, taking into account the influences and reactions of the other characters of the drama. Congruity must be with the whole picture or pattern. The action which the character performs must be psychologically, ethically, and aesthetically congruous. Here the rules of classical logic are inappropriate, and the new formulation must be more complex and flexible than traditional logic permits.

The new application of this formulation will be in the production of art combined with science. The successful practitioner will require the possession of a large humanity, a Shakespeare, combined with a Newton wielding his instrument. Congruity thus appears as a kind of non-propositional "truth" revealing the extra-logical "meaning" of life, of human aspiration, and of the progress of civilization.

Since it is true, as Einstein has said, that the great scientist, a genius like Newton, for example, is an artist in that he is creating a unified picture of reality, the aesthetic element is not completely excluded, even from natural science. Nevertheless, there still are differences between physical science and art, and these arise out of the fact that the physicist operates within a relatively fixed framework of nature for which he tries to construct a map expressing a good "fit" for the facts, without changing the structure of the territory he studies; whereas the social theorist operates evaluationally within a fluid framework and does not take nature—that is, individual-social situations—as given, final, and unalterable.

From another angle, however, the foregoing notion of "genius" is satisfactory, whether we think of him as a physical scientist or a social interpreter. In the latter field, an ethical genius (for example, a Confucius, a Socrates, a Jesus) is a person who is able to universalize principles arising out of the study of a significant but limited area and extend them to a wider field of application. The ordinary person is unable to tell the difference between an arc of a circle and a chord, when the curve and the straight line have only a narrow margin of difference, but a keen observer and interpreter, with proper instruments of analysis, can discriminate between the two, and (what is more important to us) can complete the arc and state the size of the circle of which the chord is a part he can *universalize* the relationship—or globalize it.

Jesus was such an ethical genius. From the kindness of his inner family relationships, Jesus passed to the universal brotherhood of all mankind, united by common bonds of love, charity, and mercy.

Perhaps in our envisioned science-art-religion synthesis we may dream of a future genius who, with a magnificent sweep of generalization, will unite the separate provinces of human life into one kingdom—though what the name of the king may be we cannot imagine, nor can we forecast the constitution of the realm.

The present state of the world is the period of parturition which makes human evolution possible. If the destruction going on in the world seems to prevail over the development of something better formed, let us recall that in the Hindu Pantheon, Shiva, the destroyer, had a high place alongside of Vishnu, the preserver. Both are necessary to progress, and demolition of the old and

obsolete must proceed concurrently with the building of the new, indeed, in many cases precedes it. This fact justifies the hope that a global war may lead to a global peace which will be perpetuated by a global education, culminating in global humanism. Thus a semantic analysis of what democracy has been gives us the curve of a social change whereby we construct the arc of the future and form a vision of what democracy might be—we globalize the concept into a planetary civilization for all mankind.

SCIENTIFIC HUMANISM AND THE CRISIS IN CHRISTIANITY

I. THE BASIS FOR ETHICS

There are few terms in our language which have as many connotations as the term "humanism." Many varieties of humanism are being offered the public literary humanism (Paul Elmer More), scholastic or integral humanism (Jacques Maritain), Marxist humanism (Corliss Lamont), instrumentalist humanism (John Dewey, M. C. Otto, Horace Flies), and now scientific humanism. We suspect that there are so many conceptions of humanism because there are so many answers to "What is man?" For example, if you think of man as the orthodox clergyman does—a creature with an immortal soul given to him by God, which is destined eventually to spend eternity in heaven or in hell—your variety of humanism will surely be different from that of the humanist who looks upon man's spiritual nature as a production of evolution.

The latest variety of humanism to put in its appearance, namely, scientific humanism, as advocated by such individuals as Julian Huxley, Lancelot Hogben, and others, is the type we are here espousing and defending. According to the present view, society now faces a cultural crisis (some call it a spiritual crisis) much deeper than anything produced by recurring economic depres-

sions, periodic wars, and other purely economic or political epidemics. We hold that these ills of society will never cease until the world is transformed into one universal civilization, we believe that the one great hope for such a global democracy is the development of a non-supernaturalistic morality. In the past, this hoped-for planetary ethics has been associated with the birth of a new world religion.

In the process of developing this viewpoint, we have proposed that human salvation is completely dependent upon the development of an overall political institution which we have variously called a world cortex, a planetary brain, or a world sensorium. The functional group of world co-ordinators who would administer this global democracy of the future would provide social harmony through a kind of "master reaction" integrating the diverse activities of the separate but not independent political units of the super-state. The immense expansion of certain of the sensory-cortical-motor functions of the integrative machine which this calls for has already been pointed out by Julian Huxley. Only through the creation of new machinery can the world brain emerge as the specific organ of civilization.

This way of using intelligence—in the scientific-humanistic sense—we have called global thinking. In its most important social application, global thinking builds on the conviction that national, racial, and class selfishness in the long run, when the circle of causal influence is completed, turns out to be self-destructive. Accordingly, one fundamental thesis of scientific humanism is that there is a parallelism between changes in our geometrical notions and necessary changes in our ethical insights and social

programs. Our dissatisfaction, therefore, with current theory and practice is that in modern civilization law, theology, and social customs, and the institutions through which they function, have remained conservative and static, and therefore did not adjust themselves to the revolutionary progress of modern science and technology.

This thesis that today a sound morality must be based upon a sound physics and an up-to-date biological theory runs counter to a widely prevailing viewpoint, and has drawn upon itself much criticism from the opposition. The objections made to the argument come from important sectors of the battle line, and it seems proper to reply to these attacks in some detail. We shall first of all state these criticisms, then we shall analyze them and indicate why they do not seem to be valid, after which we shall indicate what appears to be the greatest weakness in the authoritarian religions from whence these attacks are initiated.

We begin with a specific criticism of the program of scientific humanism as this criticism is voiced by one reviewer.¹ Says Dr. Maximilian Beck of Yale University

I disagree fundamentally with Reiser's opinion that "philosophy, law, ethics, and the like to be effective in a rapidly changing world must also be dynamic," if that means that they have to adjust themselves to the revolutionary progress of technology and to the consequent changing conditions of life. Just the opposite is true. All the terrible disaster of today has its ultimate reason quite obviously in the lack of adjustment of the achievements of modern technology, that

¹ See his review of *A New Earth and a New Humanity* in the journal of "Philosophy and Phenomenological Research," Vol III, 1942, pp. 116-119

is of mere tools, to the eternal spiritual aims of mankind. These aims cannot in any way be derived from scientific advances, they are essentially a religious inheritance of Western civilization, and have become self-evident to such a high degree that we have not been conscious of the fact that they govern all our moral and social evaluations.

After making the point that "the whole anti-moralistic view of Nietzsche is built upon such a biological interpretation of morality as implied in Reiser's suggestions," Dr. Beck affirms his own position in these terms. "I do not see any possibility of preserving mankind from complete destruction except by re-establishing confidence in supernatural factors which in Dr. Reiser's view are a progress-hampering tradition and a habit of a bygone world."

Before leaving Dr. Beck's argument to take up similar expressions of viewpoint, it should be noted that Dr. Beck's reference to Nietzsche as an example of what naturalism leads to—namely, the Nazi philosophy which releases the "beast in man"—raises the question of scholarship does Professor Beck give us a fair interpretation of Nietzsche? We believe many students will disagree with Dr Beck's thesis that Nietzsche is "anti-moral."²

In order to indicate how widespread the foregoing view is, let us quote another passage by a writer who did

²This procedure of pointing to Nazi philosophy as an example of what a biologically grounded ethics leads to, recalls to mind a somewhat analogous question raised by another reviewer, Dr V J McGill, who in surveying the present writer's first systematic exposition of scientific humanism (*The Promise of Scientific Humanism*) made the point that when I set up the analogy between soc organism, I do not indicate how I avoid the very undemoc conclusions drawn by German organic philosophers I trust raised by Dr McGill in his very fair summary of my positiv care of in the present volume

not have scientific humanism in mind when he penned his lines. As he says:³

It would be futile to deny that a genuine ethic can exist as an autonomous code, independent of the religion from which it was derived. But it can so exist only in individuals and for but a few generations. Such an ethic persists for a time because, though its representatives have foresworn religion, religion is still vigorous in them and keeps their eyes bright and their souls clean. It is as if the roots of a tree were drying up but the sap continued, for a while, to circulate in the trunk and twigs. It would be an error to infer that the tree could live if its roots had no sustenance, and religion is the sustenance of moral life.

The human soul is so constructed that it needs religion, needs a doctrine about the meaning and center of life. When genuine religion is destroyed man fills the vacuum with some inferior substitute, something that satisfies the psychological need for worship but misguides him because it is wrong.

In a scientific age, which insists on the tangible and verifiable, religion is discarded for science. But being the religious animal, man gradually succumbs to a pseudo-religion—a dogmatic, unverifiable belief which now informs his life and is mistaken for scientific truth because it refers to something tangible. Intellectual progress, technics, nationalism, proletarian dictatorship, racialism—such are new absolutes which absorb people's minds and are expected to conquer evil.

Religion does not make democracy safe, it only makes it possible. Religion does not make man good, he always remains liable to error and temptation, even though he knows the divine commandment. But the important thing which makes him man is that he does know the divine commandment, although he may violate it.

³ See the letter on "Religion and Democracy," by Eduard Heimann in the *Nation*, Nov 7, 1942

This, we believe, is a good expression of the supernaturalistic-authoritarian theory about religion. Perhaps a more moderate form of the same conception may have animated the English writer, J. B. Priestley, when in his book *Out of the People*, he states.

I believe that what is essentially wrong with the masters-and-masses system in all its forms, from cynical plutocracy to Nazism, is that it is rooted in a contempt for human individuality, in a disbelief in any possible development of the human personality, in a denial of any moral order in the universe; in black despair of the life of the spirit

Thus, while he is no defender of the dogmas of the churches, Priestley does insist that the values of the new society must be spiritual. According to this view and contrary to the dictates of the fascist gangs, we must recognize that if we have immortal souls and are all children of God, then we are real people. Only through a belief in immortality, soul, spirit, and deity can we prevent the crime in which "murder" becomes "liquidation"—so smooth, so easy, slipping so quietly off the tongue

Now the issues raised by the foregoing expressions of opinion present us with one of the most complex, perplexing, and important problems of modern times. There probably is no situation where clear thinking and courage are more in order. Our own conviction is that those who want to associate morality with a "spiritual awakening" to be identified with the teachings of any one of the existing authoritarian churches, are going to do society real harm. When the defenders of this "true faith" remind us that the war teaches us that "there are no atheists in the fox holes" and then interpret this to mean that

what the world needs is an authoritarian religious revival, they are guilty of a confusion in their thoughts which can only produce more social conflict later on. If there is anything the world does not need, it is a return to some old-time religion which was "good enough for father and is good enough for me"

II. THE FUTURE OF RELIGION

One of the great obstacles to the understanding of the value of religion arises out of the fact that we talk about "religion" at great length, and since we use the same terms, we suppose we are all talking about the same thing

Recently a radio symposium was conducted on the subject of the "future of religion," and representatives of the various "faiths" expressed their views on this subject. As the discussion proceeded, it became clear that the speakers did not agree on the "future of religion," largely because they were not talking about the same thing. Towards the end of the program it was suggested by one of the participants that they ought to define "religion" before they continued further—but by then they had already used up all the available time, and the thing that should have been done at the outset was never undertaken. Some years previously, however, such a task was undertaken. A candidate for a Master's degree wrote a thesis on the subject of various conceptions of religion. The candidate assembled no fewer than fifty different definitions and then stopped. If he had been writing a doctor's dissertation, he probably would have been urged to carry on his investigation until he had collected a hundred definitions.

Since we are not recommending scientific humanism as a religion, the obligation of defining it is not ours. We have insisted that scientific humanism embodies the religious spirit, but we have avoided advocating it as a "world religion" to replace other religions. The difference between "a religion" and the "religious spirit" has already been established, and we need not at this point justify our use of this distinction. But what we do need to observe is that in the light of this distinction a particular "religion" can easily be the greatest enemy of the religious spirit.

Does this mean that in the outlook and program of scientific humanism Christianity is done for and that there is no place for the Christian church? The answer is that the only way to preserve Christianity as something above mere Churchianity is to reinterpret the mission and spirit of the Man of Galilee, the "Founder" of the "Christian Church," and transform the conception of Jesus.

The charge that this is irreverence need not be taken seriously. If we look upon Jesus as a great advocate of the twin virtues of the vision of truth that makes men free, and the love of humanity as the greatest of the commandments, the synthesis of knowledge and love becomes the ideal of Christianity. Recently one of the authors received a letter from a fine friend of man who has lived profoundly in human experience, which expresses this conception of Jesus in these words.

Rightly or wrongly, I feel personally that the symbolic meaning of the cross is the intersection at right angles of two dimensions, a symbol of mutation into a higher reality.

The Christian cross should signify the "sacrifice" or making sacred, of the complete three-dimensional man as the vehicle of the new four-dimensional Man Transfiguration, completion of the three dimensional man, his crucifixion, death (in the sense of relinquishment), resurrection or re-vitalization, and "ascension" into the higher dimensional world of consciousness, where the Christ is available to any man . . . "the Christ-in-you" are all part of a process Strange as it may seem, I have felt for a long time that the real significance of the Palestine Mystery was the birthing of the age of scientific knowledge, to parallel and objectify the intuitive knowledge of the East The principle of love could never be rightly established except through the rationality of man, this I think is amply proved by what we have made of love in the non-intellectual, sentimental Christian morals and philanthropy Is charity love? Are human relationships today, love? We can only become detached from self-interest through mind, in its various degrees of reason, intellect, and intuition, and then we must go *through* mind into beyond-mind, into the realm of synthesis, before we can love wisely or think compassionately.

This statement is excellent in that it brings out the synthesis needed if we are to love wisely and think compassionately. The great defection of the Christian churches from their legitimate function occurred when institutionalized Christianity became precisely what Christ intended it should not become—a congeries of orthodox dogmas, solid, inflexible, retrospective, and opposed to the quest for the As-Yet-Unknown truth that will make men free Now we must try to undo the concretions of almost two thousand years of European theological development and free the spirit of Christianity from the fossilizing influence of literalistic minds.

III "LOGIC TAUGHT BY LOVE"

This reinterpretation of the meaning of Christianity could easily fit into the program of scientific humanism. If we were to state the crucial need and purpose of our society, which an adequate (secular-religious) education can administer, we believe we would suggest the assimilation of intelligence and emotion, the fusion of logic and love in the control of life. This doubtless sounds like sentimentalism to some, but there are good grounds for this viewpoint as we shall try to show. In developing this conception we shall find support for it in the views of philosophers of various backgrounds.

Henry Chester Tracy in *Towards the Open* writes that "consciousness includes both reason and faith . . . all that we call 'the spiritual' must appear as a mode of consciousness." While in *The Life of Jesus* Conrad Noel writes "It is a common heresy of the 'religious' to belittle the head at the expense of the heart and to preach Jesus as the Sacred Heart, forgetting that he is also the sacred mind, the sacred imagination, and the sacred will. Sentimentalism seeks to magnify Jesus but only succeeds in making of him a holy weakling."

Another writer we introduce is Mary Everest Boole, niece of the man for whom Mount Everest was named, and wife of George Boole, one of the great mathematical logicians of England. On other occasions attention has been drawn to the pioneering work of this woman in the field of education, pointing out that Mary Boole's *The Preparation of the Child for Science* is a classic that has been too long neglected.

Was it not John Erskine who coined the phrase, "the moral obligation to be intelligent"? This reminds one of the burden of the teaching of Mary Boole, found in her insistence upon the moral obligation to be sane. She realized that in our kind of society the problem is this how to make society sane through an understanding of science, and how to make science humane by catching it up into the movement toward larger and more inclusive wholes—the as-yet-unrealized universe of the higher unity. Mrs. Boole's phrase, "logic taught by love," reminds one of Bertrand Russell's definition of the good life as the life inspired by love and guided by intelligence. In both these views, it is clear what is called for is a harnessing of intelligence and emotion. If one were permitted to rephrase Russell, we might suggest that according to Mary Boole the good life is the life inspired by the sense of awe and reverence in the presence of the As-Yet-Unknown (the Higher Unity), and guided by mathematical logic. We say this in no spirit of playfulness, for it really represents the spirit of her procedure for the "forging of passion into power"—humane power wisely used under the benediction of love.

Certain philosophers of a "tough-minded" fiber may be inclined to dismiss the work of Mary Boole because, in their eyes, she is guilty of the odious philosophical sin of sentimentalism. In order to be forewarned against this type of prejudice, it is well to recall that even such a scientifically tough logician as Charles S. Peirce held views which at some points resemble the doctrines of Mary Boole. One such parallel is found in Peirce's theory of evolutionary love, in which love appears as the deepest motive of human conduct.

In spite of Peirce's logical interest in the theory of signs (semiotics), Peirce was not only willing but found it necessary to supplement his logical theory with a metaphysics. In this scheme, man appears not merely as the "interpreter of signs" but is himself a sign of a more inclusive reality in which he finds himself, the Community. Peirce even employed the now much criticized concept of the "group mind." This love of mankind which Peirce insisted upon—a manifestation of what he calls a "deep subconscious passion"—seems to play the same rôle that the "higher unity" plays in the undeveloped metaphysics of Mary Boole.

IV. LOGIC AND LOVE IN GLOBAL WHOLENESS

Let us now connect these suggestions of Mary Boole and Charles Peirce with our problem of learning how to "love wisely and think compassionately." To do this it is necessary to remind ourselves constantly that the total problem we are concerned with is that of social integration, the fabrication of a master-plan—an economic-political-ideological synthesis—whereby a true social organism may be brought into being.

As we have interpreted it, the problem of global planning involves two parallel developments, one in terms of cultivating an intuition or subjective feeling of the biological unity of the human race, and the other in terms of an outer, objective creation of political institutions to incarnate the emerging spirit of humanity. Both lines of growth are correlative, and "global semantics" is the bridge which makes possible the transition, backward

and forward, between the inner and outer worlds. The kind of metaphysics presented by Mary Boole and Charles Peirce (and one might also add Josiah Royce) gives us the philosophical framework for the subjective aspiration towards globalism. Having thus dealt (in a preliminary way) with the cultivation of the inner global drive—in which the mission of Christianity, interpreted in terms of scientific humanism, reappears as one vehicle for nourishing a world ethos—we now return to the equally difficult and always-present problem of creating the social organism as the objectified embodiment of planetary wholeness. Later on, however, we shall again turn to the subjective side of the global drive.

V. GLOBALISM IN BIOLOGICAL EVOLUTION

In turning once again to this problem of biological-social integration, let us consider some analogies from the field of biology to see whether we may not find in nature, lower down in the scale of evolution, some fore-runners of the type of transition we have in mind when we contemplate the possible methods of development for a coming social organism.

Let us begin with the homely and crude observation that an army travels on its belly. Commonplace as this truth is, it brings out the fact that some of the activities of society are like the progress of an earthworm. first of all you pull up the rear end, and then you thrust forward the front end. (A biologist informs us that some worms work on the opposite principle) But in any case, such an organism is incapable of locomotion—the directed,

co-ordinated action which leads towards progress in space—until it gets a head, i.e., the creature must have a cerebro-spinal axis. The moral of this story, on a much higher level, is that humanity needs to be cephalized by acquiring a sensorium, if it is to make an analogous social progress—no longer in space but in space-time.

Now the problem of creating this super-organism with its world brain is analogous to the problem of how nature was to pass from the single-celled animals, for example the amoeba, to multicellular organisms higher in the scale. The theories about how this transition may have occurred are recorded for us by Dr. Libbie H. Hyman.⁴

Dr Hyman starts with the proposition that since metazoans (many-celled living creatures) develop from a single cell, the egg, this means that phylogenetically they originated from protozoans (single-celled creatures). The probability is that the many-celled organisms resulted from the consolidation of a *protozoan colony*. The older supposition that the amoeboid protozoans are the most primitive animals and must be looked upon as ancestral to the metazoans is now displaced by the belief in a flagellate ancestry, according to Dr Hyman. Among the reasons given for this change of opinion is the resemblance of the animal sperm to the flagellate protozoan. The probability now is that the metazoa arose from the colored holophytic flagellates (like sponges, coelenterates) by way of colony formation, followed by loss of chlorophyll and the assumption of holozoic habits. While Dr. Hyman does not explain this technical language, presumably she is referring to the transition from plant to

⁴ See the article on "The Transition from Unicellular to the Multicellular Individuals," in *Biological Symposia*, Vol VIII

animal—"phytic" to "zoic." Moreover, she unfortunately does not tell us much of how this transition may have occurred and to supply some of the missing pieces, we quote the following paragraph from another article:⁵

Something of the nature of the problem may be seen in the case of chlorophyll and its congeners, which are crucial to all physical life. Chlorophyll A is a molecule containing as many as 136 atoms $C_{55}H_{70}O_6N_4Mg$. In this molecule the last atom, Mg (magnesium) is enormously significant. For though this chlorophyll constitutes the green element in plants, through which sunlight is poured to convert sap into sugar, thus making all plant and animal life possible, the substitution of *one* copper atom for the *one* magnesium atom converts the chlorophyll into another life element altogether, an element essential to lower animals—the substance haemocyanin—while if the one magnesium atom is supplanted by one atom of iron, we have the red blood haemoglobin of the higher animals, including man.

Thus does nature accomplish one of the most remarkable of her achievements, the biological alchemy whereby new forms are produced!

The next problem we encounter in following the progressing story of this transition is the question of when and how the primitive metazoan, once it came into existence, adopted the principle of equatorial cleavage, which is the starting point for cell differentiation, so essential a feature of a *metazoan individual* as contrasted with a protozoan colony. The theories to explain this are too numerous and too complicated for discussion here, but Dr. Hyman favors the theory of Metschnikoff, who

⁵ See the Editorial Summary by Fritz Kunz, in *Main Currents in Modern Thought*, December, 1942.

surmised that the blastula-like flagellate ancestor became a two-layered creature by the wandering of cells from the surface to the interior, particularly cells loaded with food. This process produced the organism now known as planula, where surface cells catch food in a flagellate manner and pass it in part to the interior for digestion. Thus the locomotory and food-catching functions are combined in flagellates.

Having brought us thus far, Dr Hyman then leaves the morphological phase of the question to consider the physiological aspects. She points out that the difference between a spherical colony of protozoa and a spherical multicellular individual (like Volvox) is obviously a functional one. In the first case, the cells act in independence of each other and the colony rolls about aimlessly. In the second case, the cells act in co-ordination, the colony is polarized and swims always with one pole forward, and each cell is no longer capable of all possible functions. Such co-ordination can result only from a relation of control of one part of the colony, namely, the anterior pole, over the rest of the colony—the relation is one of domination and subordination, as Professor Charles M. Child terms it.

How does such a relation come about? In the last analysis, it would seem that it can happen only through the influence of surrounding factors. Organization on the plane of multicellular organisms involves as its steps the following functional polarization resulting from environmental exposure, co-ordination of the cells conditioned by a dominance-subordination relation, and finally morphological differentiation (division of labor) with reference to the axis of polarity. When this level of biological

organization has been attained, the constituent cells of a multicellular individual lose their capacity for independent life, each of the cells gives up some of its liberties; and they must all co-operate with other cells to perform the functions of the individual as a whole. This means that some cells must accept the position of subordination as they submit to being governed by the dominant parts.

As one surveys this story of the transition from one level of biological organization to a higher level, a transition that occurred for the first time ages ago, can one doubt that many of the principles involved here can be transposed to the next and coming transition to the level of the social super-organism? Can one doubt that the "wisdom of the body" may teach us much about a corresponding wisdom of society, still to be learned?

But before we enter upon this topic, let us follow up a bit further the story of evolution, dealing this time with another and later "crisis" in the advancing frontier of living things as it moves up the tree of evolution.⁶ To remove any lingering doubt concerning the value of the central nervous system, the following story of an important biological event dating far back in the history of animal evolution may be told. Nowhere can we find a better illustration of the value of the cranium than in the story of the conflict between the brain and the belly, a conflict that occurred many eons ago.

⁶For another example from science see an article by Tate Regan in *Atlantic Monthly*, March, 1943. He says "My own work on the structure, classification and geographical distribution of fishes has led me to certain conclusions I believe that the first step in the origin of a new species is not a change in structure but the formation of a community."

In the anatomy of the earthworm, we find strands of nerve fibers running along the ventral side of the food tube, and connected across at each segment until the double chain gets to the head. When the cables get up to that part, they form a ring or circle of nerve fibers surrounding the esophagus or gullet. This gullet is a part of the food tube through which food must pass on its way from the mouth to the stomach. An eminent English biologist spent many years trying to find out how this type of nervous system developed into the nervous system we now have, the system which belongs to the vertebrae of backboned animals. He finally developed the theory which is here set forth in the words of Dr. William A. White:⁷

These segmented organisms were dependent upon food, as are all of us, and the food became scarcer and scarcer so that they had to develop brains in order to devise methods of finding food when it was scarce. The type of organism of which I am now talking belongs at about the level of the spider.

The point reached by the spider, then, is this—he had to have brains, but the more brains he got the more they shut down on his food-tube, and if he developed too much brains he would starve to death, on the other hand, if he did not get food he would also starve to death, and he could not get food without developing brains. That is a difficult position to be in, and as Professor Gaskell said, at that point in the history of evolution, living organisms, so to speak, had to decide whether, in the future, life would be a matter of belly or of brains. One or the other had to give way.

Now an extraordinary thing happened. A new intestinal

⁷ "The Adjustments and Unity of the Organism," *Psyche*, July, 1926.

tract was developed outside the nervous system. The old gastro-intestinal tract ran right up through the bars of nervous fiber, but the central nervous system of vertebrates is developed on the back or dorsal side, and the gastro-intestinal tract lies ventral to it. There are some very interesting things to show what happened. The brain and the spinal cord are hollow organs, there is a series of ventricles or cavities in the brain and a long ventricle running down the spinal cord. These are supposed to be the relics of the old gastro-intestinal tract that was destroyed by the vertebrates.

At the base of the vertebrate brain is the pituitary gland. Right through the center of the pituitary gland there runs a little channel, and that is the remains of the old esophagus of the spider. It is there today and the pituitary gland is made up of two distinct parts one of these comes, during the development of the embryo, from the upper part of the esophagus, and the other is derived from the nervous system. So that we have within us today the trace of this old conduit, and we have to be thankful that the conflict between belly and brains was decided in favor of brains.⁸

All this, of course, is now a part of the past, the record of what has happened. As we look into the future, what are the prospects, the requirements, and the strategy of human evolution in terms of what it should be? For one thing, it looks as if human evolution has reached an analogous cross-roads, in the sense that we, too, face a brain-belly dilemma. How can we evolve a system to distribute food to all, when to get the social intelligence (brains)

⁸ Is it merely coincidence that the first move towards creating a world "brain," a United Nations federation for postwar reconstruction, was the world food conference at Hot Springs, Virginia, in May, 1943? If the human race is to survive intact it must first come to grips on the problem of food, and to do that it must have a world-mind on the problem of production and distribution of food.

to create an economic machinery we need to prevent economic-political chaos (preventing starvation and malnutrition is a part of this), and we cannot do this unless we have more brains?

The brain-belly impasse on the human level arises in part out of the fact that we have "money" as a medium of exchange, but money is the thing which stands in the way of a more effective distribution of economic goods. What will be the extra-neural (social) medium of circulation and distribution that will enable us to escape the horns of the dilemma? That is one of the most important problems for the makers of blueprints for the coming planetary society.

VI. MAPS OF TERRITORIES-TO-BE

The drawing of blueprints for the global social organism is no easy thing. As we have seen, this is a matter of forming a vision, a map of a non-existent territory, and then framing plans for bringing into existence the territory-to-be. This is a matter of what is termed *normative semantics* (or *global semantics*), as opposed to descriptive semantics. The delineation of a map of a non-existent territory involves the *creative use of language*.

Years ago, in *Humanistic Logic* (1930, p. 6), it was pointed out by one of the authors that an analogy existed between scientific reasoning as a sending out of mental tentacles into the external universe to anticipate further sensory experiences and the amoeboid (or flagellant) movements of unicellular organisms. It may turn out that this is no mere analogy, but indeed the fundamental mode of locomotion of intellectual as well as spatial

progress. Just as in biological evolution the eye develops an anticipative touch, and sight becomes the principal means of distance reception, so in imaginative constructiveness the fulfilment of visions of reality-to-be is a matter of realizing the desire to see, and in the whole plan of nature from amoeba to man, the same "reaching out" of protoplasm is manifest. Creative thinking is a feeling of one's way through the universe, a kind of social cytotropism or neurobiotaxis.

The amoeba explores its universe by projecting its pseudopodia into the space around it. Here the enlargement of the environment is a result of a tentative groping into the unknown. But the scientist is also an explorer, a voyager along strange shores and over untracked continents. He projects from himself his mental pseudopodia, those intellectual tentacles which reach out even to the stars in their anticipations of further experience. And if it be true, as some believe, that in mental activity a similar type of amoeboid movement occurs in the nerve cells of the brain of the thinking man as he ideally explores new worlds of conceptualization, then reasoning becomes in fact the experimental-exploratory activity, only on a much more subtle and intricate scale, we observe in these lowly organisms, the amoebas, that feel their way by trial and error through the universe of micro-organisms.

Many individuals today are working creatively towards a new eye-brain-mind layout, social in its structure and operations. Bishop Berkeley, who, far ahead of the plodding physicists, bored his way through the Newtonian matter to something like an energy-continuum, was much given to speculations about a new kind of vision.

This new vision, quite beyond what Berkeley was thinking of, is what alone can save society, if salvation there be, in an all-seeing eye and brain for the social mind that will enable the great leaders of the future to serve as molders of the topological structure of human energy-patterns—the field-plenum dynamics of society.

VII. THE LOGIC OF LOVE

Returning now to our earlier problem of the synthesis of logic and love, the head-heart integration which an enlightened Christianity might foster and promulgate, we find our cue for this cortico-thalamic integration in a parallelism of doctrines presented by Mary Boole and Charles Peirce. If we assimilate Mary Boole's doctrine of the relation of the conscious and the unconscious, or the new brain and the ancient nervous system, to Peirce's doctrine that matter is inert mind, the result of the tendency of functions and processes to settle down into routine habits, which then become expressible in terms of physical laws, we arrive at a conception in which Peirce's "evolutionary love" becomes a part of the conscious driving force which, as it moves along, deposits a kind of skeleton of uniformities. In the case of the human being, this physical basis of uniformity is preserved in the ancient nervous system (of the thalamic and subcortical levels) as the reservoir of the unconscious, which in turn conditions our conscious life by providing the context of man's conscious (cortical) activities.

Mary Boole liked to quote the statement. "We *feel* as our ancestors *thought*; as we *think* so will our descendants *feel*." In developmental terms, this would mean that

conscious evaluations tend to drop down into the subconscious where they become feelings (intuitions) which give us the "set" and the "framework" for psychical life. Thus the conscious and the unconscious fields, the new and the ancient nervous systems in man, play into each other. This doctrine becomes peculiarly apt when we recall that intellectually—that is, in terms of mathematical analysis—musical harmony and melody may be very complicated, but emotionally the beauty of that same music as analyzed mathematically into the harmonics of the corresponding Fourier's series may be very simple and pleasing—as easily interpreted and enjoyed as the smile on a baby's face. Now if it is true that the descendants of the present generation will feel as we think, then one may suppose that out of the painfully slow, complicated, and endlessly difficult travail of the present generation to create a new world order, we are bringing into being a world federation, a universal temple of humanity, the necessary framework of which future generations will accept immediately and intuitively, so that the synthetic social products of our present strife will be conferred upon them as a kind of psychic birthright—the emotional apprehension of the higher unity of social wholeness.

The final meaning of all this turns out to be as follows. The making of blueprints for territories-to-be is a kind of reaching out into a new dimension, an imaginative locomotion on the social level of individuals who are trying to create a space-time (or time-binding) synthesis for society whereby a new simplicity may emerge. Just as within the nervous system there is an embryological elaboration of a nerve-cell structure under the compul-

sion of a stimulus pattern, due to a migration towards the source of the irradiating energy of the stimulus-pattern, so on the social level there is (or can be, if we succeed) an analogous migration (neurobiotaxis) of the nerve cells (individual thinkers) who are entering into the harmony of an emerging social cerebrum or World Sensorium.

This onward-upward surge is correlated with the amoeboid movements, or flagellate activity, of individual "cells"; and the neurobiotaxis of the neuroblasts in the individual's central nervous system are in three-dimensional space, while the extra-neurobiotaxis of the "neuroblasts" (human individuals) of the emerging social organism are in the hyper-dimensional manifold of a World Brain. Thus, there is in both cases a convergent march to a melody and an order which is building better than any constituent notes are likely to be aware of—at least until that harmony of activity is appreciated emotionally by a generation of descendants who experience intuitively what an earlier generation labored to create, consciously, hesitatingly, and by trial and error.

By way of compensation for this unearned increment which we bequeath to coming generations, let us recall that we, too, are the inheritors of a legacy from our ancestors. those lowly organisms which long ago solved the problem of "brain versus belly" and gave us an example of what nature's creatures can do, once they set their minds to it!

THE SPIRAL OF SOCIAL EVOLUTION

I THE FORMS OF CULTURE

As we have depicted human culture, civilization appears as the shadow cast by man's evolving consciousness. These "shadows" are the topological forms which are fashioned by men to organize their purposes and institutions within a broader framework of social structure. The culture patterns that men possess are for the most part of the forms passed on to them by traditions, conventions, folkways, laws, and so forth. They emerge from out the past to play over the individuals of society to give a meaning to such phrases as the "genius of a people," the "spirit of the age," the "group mind," and the like.

However, as time runs its course, new culture patterns do somehow appear, old forms vanish and are replaced by the novel forms that take their places. Today, as we have observed, we face the necessity of creating new thought forms on a world-wide scale, a "mythos" for a global society. No global planning on the objective side, in terms of new economic and political devices, can be humanly beneficial unless there develops alongside a subjective global planning based on pervasive emotional urges, such as love, mutuality, and human sympathy. Political institutions are mere creaking machinery unless animated by an integrative emotional spirit.

How shall we create the necessary World Form for the Global Society? Talk of a "coronation ceremony for global democracy" is idle verbalism unless we somehow, day by day, help to create the "global house of tomorrow" into which we are to move, and from which we hope to irradiate a universal humanism. That such a World Form must be built, if we are not to be submerged by a new despotism, is readily seen, for the tragic possibility for this universal master-slave relationship grows out of the very weapons of modern warfare. The potentialities reside in the basic structure of our society and are incorporated in what John W. Studebaker calls an "air-age geopolitics." The interrelatedness of peoples in an age of airplane and radio creates the condition in which there will be an enslavement of men's minds by the conquering masters, unless the facilities of air-age geopolitics are used by free peoples everywhere to build a democratic world order on a planetary scale.

So far as the past is able to teach us anything, it appears that the new forms for civilization that replace the old culture-patterns have been, and therefore in the future will be, the product largely of the creative thought of exceptional individuals. Groups as such never originate new developments. Public opinion is not itself spontaneously creative. It is a condition for the acceptance of new forms, but does not itself produce new ideas. Public opinion can be evoked for good or ill, it can be manipulated by individuals with strong powers. More recently we have seen the development of "pressure groups" which also have mastered the art of manipulating public opinion, though unfortunately such groups have usually served selfish interests. Perhaps the new thing for the

future will be the development of groups with supra-personal interests.

However new plans may originate, it is clear that no projected world form for the future can hope to succeed in our world without the heat and pressure of mass emotion, the desire and will of great bodies of people. A world group could manipulate mass emotions if it could recruit a mass desire on a global scale. But the spell of a girdle of unity could be cast around the world only through a master-plan of manipulative ingenuity. Is this possible?

The story of religion relative to this point has one lesson to teach us. New steps up the ladder can only be taken by building on what the past has achieved. Even Jesus has to build on the memory basis of the Hebrew background—and still the best conception of the *Father* of Christian ideology is “all the potentialities of the past.” If therefore we are to climb to the next level in the spiral of human evolution, we must somehow take advantage of all these potentialities of the past, preserved in geological-human history, and bend the curve of planetary development into the arc of a time-binding synthesis. Two billion years of earth history must somehow become the background for a series of great striking acts which, wave on wave, will approach the climax for the realization of which history has been building a rich memory setup.

In the present volume, we have tried to state what that climax could be. In a previous volume, one of the authors has described the philosophical motif of this thought-pattern in terms of a “religion of light.” Now we no longer think of it as a “religion.” But that is not a major

issue. What is important is that any broad theory—religious or philosophical—can succeed only if it takes full advantage of existing institutions and facilities. The time is too short for completely remaking the world along different lines. The meaning of history can and must be written in terms of what it is possible to salvage from the past. It is therefore with some satisfaction that we point out that the reinterpretation of Christianity—best candidate thus far developed for the coming “world religion” which some persons want¹—makes it possible to utilize to the full the potentialities of the past, for, as we shall indicate in a moment, we not only make contact with the Hebraic background of Jesus, “the First Christian,” but, beyond that, with ancient Egyptian wisdom and Hindu philosophy.

II. A PLANETARY SYNTHESIS OF CULTURES

If it is true, as the antiquarian put it, that Stonehenge is God’s plan for the world, it must become true that

¹ Our conception of Jesus, the “First Christian,” is similar to that of Mary Boole. As she points out (*Collected Works*, Vol IV, pp. 1327-28), science seizes her prey where she finds it—which means that science has seized upon Jesus as she might upon a flower or a star. Then a remarkable thing appeared “When science had got Jesus into her grasp and under her microscope, she made an overwhelming discovery *Jesus laid down canons of time sequence.*” Mrs. Boole cites numerous examples of this from the New Testament and then concludes “From the point of view of science, then, Jesus was a scientific man, Who appeared in a society as much occupied with religious and ethical notions as ours, and as profoundly unscientific as are the religious bodies of our day. He tried to import into the chaos of religious and ethical discussions those canons of order and sequence which are found to work so well in the prosecution of physical science.”

man's plans for the god-in-humanity is that Stonehenge shall be projected over our planet to circumscribe the spinning world with a global altar for humanity's worship of man's potentialities for surpassing himself in that upward swinging circle of human history which makes the spiral of human progress. And how, we repeat, shall this be attained? Let us restate our argument once again.

As we have viewed the situation, two types of global planning must be carried on simultaneously, the ultimate goal being the progressive convergence towards a coalescence. At present each marches to its own type of synthesis, the one subjective (ideological-emotional) planning, having for its goal a psychological-ethical harmony of head and heart, and the other, the objective planning, aiming at the social-cultural unity of a global or world civilization. The poet William Blake thought that the "fall of man" occurred when the intellect was separated from feeling and imagination. If so, the resurrection of man will come from a reunion of these functions in a psychological at-one-ment of the total self in all its mobilized and co-ordinated activities. But this program of subjective unification can be successful only to the extent that it helps to create and in turn reflect an objective synthesis of social perspectives.

To some, no doubt, this plea for a global synthesis—a unification of Oriental and Occidental cultures—will appear as the foggiest kind of impractical idealism. But in defense of the grandiloquent scheme of an East-West planetary unification, we need only invoke the authority of Dr Lin Yutang, who advances the same thesis. His plea that "out of the shattered fragments of modern knowledge, a new world must be built, and the East and

West must build it together" is not only eloquent—it is "realistic" in realizing that the bottom has been knocked out of our human universe, and Chinese humanism is one of the powerful forces in our society which can help us restore that foundation.

This same point has been made by Fritz Kunz.² As he puts it:

If we are to have global thinking, when do we begin seriously to pay some attention to the concepts of the Orient? When are we to see in the Universities something more than glancing reference to the high achievements of China and India, and a reformation of the spirit which tries to turn that wealth into a sort of by-product of superstition, suited really for the anthropologists, not for the serious philosopher? Obviously such changes cannot be effected until we have a genuine knowledge of those thoughts. And we shall never get them from Western Orientalists, born outside the tradition and entering it with a certain suspicion and even disdain . For Planetism to be accelerated, we must have a willing interest in the roots of human intellectual power. These roots are in the East, and they are still alive.

III DIALECTIC: HEGELIAN, MARXIAN, AND GLOBAL

Now this idea that the world requires an East-West synthesis is entirely consonant with our previous declaration that the ideological oppositions in our culture are phases of the movement towards the same globe-like truth. This, it will be observed, is our substitute for Mary Boole's reunion after contrast and tension, when, after

²Cf *Main Currents in Modern Thought*, January, 1942, p. 15.

passing from affirmation to negation ("one" to "zero," in George Boole's symbolic logic), we achieve a higher unification in the next most inclusive universe of discourse. As we have interpreted this movement of thought, it fits the pattern of the Hegelian dialectic, except that the Boolean interpretation seems to view the process as merely epistemological (a matter of the mental processes, the logical arrangement of classes), whereas for Hegel the movement is also ontological, a matter of how nature behaves.

The later Marxian interpretation also seeks the higher synthesis which reconciles opposition, and in this respect Marxian dialectical materialism is simply the Hegelian dialectic stood on its head. But both types of theory (Hegelian and Marxist), influential as they have been, suffer from defects which need to be remedied.

One limitation of Hegel's formula was that he stopped with the German state and Teutonic culture as the final and highest synthesis. It is not surprising to find that Germany has been ideologically predisposed towards national socialism (Nazi philosophy), for this is simply the apotheosis of Hegelian totalitarianism. And in this particular respect, Marxian socialism and the communism of Lenin, as *international socialism*, is an enormous improvement over German *national socialism* (Nazism). But while this Russian extension marks a forward step, it, too, has suffered from the limitation of supposing that world communism represents the final goal and synthesis of social evolution. Our own surmise is that the next step in the synthesis of oppositions into a global-like comprehension will not be world communism, but the establish-

ment of some more inclusive civilization which transcends our present ideologies and cultures.³

As we look over the field of global dialectic, it is as if the movements of thought embodied in cultures played over the surface of a world cortex: the Eastern Hemisphere (Eurasia and Africa as one "world island") and the Western Hemisphere (North and South America) being like the right and left lobes of the human brain, while over the surface of the global sensorium the migrations of peoples and the destinies of nations play like electric signs over a bank of lights—planetary electroencephalograms wandering over a world surface!

Or if we change the figure of speech somewhat, the two sides of our planet, the Eastern and Western Hemispheres,

³ Another defect of communism resides in the Marxist interpretation of the dialectical process. In his very thorough analysis of the various uses of and confusions in ideas about "dialectic," Dr. Sidney Hook points out (in his *Reason, Social Myths, and Democracy*, 1940, p. 216) that Engels' interpretation of the Hegelian principle of the negation of negation as a principle of mathematics (that is, as Engels argued, if we multiply minus a by minus a we have the original positive magnitude, but on a higher level) just simply is not correct. If we negate $-a$, we do not necessarily get a^2 . It is possible to invent a mathematical system in which $a \times a = a$, and $-a \times -a = -a$, and this, Dr. Hook maintains, is precisely what Boole did in his "Laws of Thought."

Our own reaction to this suggestion is that Dr. Hook is entirely correct in criticizing the Marxist use of the Hegelian principle of "the negation of negation," but we do not think his appeal to Boole's logic to refute Engels should be interpreted as meaning that no dialectic is feasible if it tries to justify itself by appeal to principles of mathematics or logic. Actually, Boole's method can be assimilated to dialectical principles, and this was done by George Boole's wife, who claimed that her own metaphysical applications of her husband's discoveries were acceptable to George Boole. Whether her interpretations were indeed a fair application of Boole's "Laws of Thought" is a subject discussed in the volume, *A New Earth and a New Humanity* (Chapter X).

spheres, are like the structural framework of a giant armature which rotates in the space-medium of our solar system to set up the earth's magnetic poles, a global field of force, and terrestrial electromagnetic phenomena generally. The thesis-antithesis movement then appears like the reversal or the alternating current, represented mathematically by $\sqrt{-1}$.

If, now, as we have proposed, there is some intimate connection between the biological-social movements of human history and the planetary background of man's global enterprise, it would appear that it is no accident that it is the East which has given the West the concept of zero (which the Greeks did not have), from which European mathematics, revived by Arabian science and philosophy, introduced into Europe through Spain by the Moors and the Jews, secured a powerful new impetus. The concept of zero derives from the mathematics of Hindu culture in India, and this, combined with the Arabic numerals, irrational numbers, and other later developments, created the mathematical basis of the technology of Western culture. And so our vaunted Occidental culture is Eastern in origin⁴ This confirms our own previous claim that it required the European mind in revolt against the Greek stereotypes to give us irrational numbers (e.g., $\sqrt{-1}$); but this development, we repeat, was no parthenogenesis—the egg-cell of Western civilization was fertilized by contact with Oriental culture.

⁴ Fritz Kunz puts this humorously in this fashion. From Hindu and Arabian mathematics we derived the concept of zero, from this basis Europe derived its higher mathematics, from higher mathematics we get technology, from technology we get the electrical industry, from electricity we get the radio, and from the radio we get Jack Benny—so we are back to zero again!

A similar cross-fertilization was at work in the germination of our main religious tradition, as can readily be exhibited by a brief glance at the interactions at work here. We have already hinted at the Egyptian sources of Hebrew-Christian tradition which "took over" the development of European culture, and now we return to this loose end in our discussion. What is the story here?

IV. THE RELIGIOUS SYNTHESIS

Theology has credited the origin of monotheistic religion to the peculiar genius of the ancient Hebrews, but Professor James H. Breasted has shown in his book, *The Dawn of Conscience*, that the Hebrews borrowed from the Egyptians, who had already substituted the monotheistic solar religion for the more primitive magical religion. And if it is true that "conscience," the challenge of the voice within as something superior to the authority of tribal customs, dawned in the valley of the Nile five thousand years before Christ, then the moral sentiments of civilized society originated in Egypt long before the "age of revelation" of the Hebrews, and without irreverence it may be exclaimed "Out of Egypt have I called my culture!"

The bridge that unites the Egyptian-Hebrew-Christian religious tradition with the pagan Greek sources of our Western culture is provided by the Greek *Logos* doctrine, which was taken into the New Testament metaphysics by the theology of St. John, who begins his gospel with the statement, "In the beginning was the Word. . ." Thus, as A. E. Avey has pointed out, the *Logos* doctrine of the Grecizing Christians, transfused with the

teachings of Jesus, is really a diffusion of culture from the religion of the land of ancient Egypt.

It has even been supposed that this *Logos* doctrine, which passed from Neo-Platonism into the gospel of St. John, may have been derived from the Indian conception of *Vâch* (meaning voice, speech, word), for when the "divine Vâch" or language is personified it becomes the vehicle of eloquence and wisdom.⁵ In that case, the derivation of the *Logos* doctrine may not have come from Egypt as the original source, for we then face the possibility that both the Greeks and the Egyptians may have borrowed from the earlier Aryan ancestors of the ancient culture of India. Such a doctrine would be in harmony with the conception which some scholars advocate, that Plato, the great admirer of Pythagoras, with his doctrine of metempsychosis (transmigration of the soul), doctrine of bondage and release, number theory, and the rest, ultimately, through the medium of Pythagoras, obtained many of the elements of his (Plato's) philosophy from India. However, the evidence for the theory that Pythagoras was familiar with and borrowed from the doctrines rooted in India is too meager to permit of definite conclusions, and we must leave open the question whether Greek philosophy, through Pythagoras and Plato, can be traced back to Indian conceptions. Perhaps the early Christian metaphysicians secured their *Logos* doctrine from the Greeks who were in turn influenced by Egyptian sources, but they, in turn, may have benefited by a diffusion of culture from ancient India as

⁵ On this point, see *The Philosophy of Ancient India*, by Richard Garbe, 1899, p. 53.

that culture passed through Persia and into Africa on its way up to Europe.

However these diverse elements may have come to be assembled into the mosaic of Western civilization, the fact remains that philosophical and religious elements from the cultures of the East have been added to the pattern of Occidental civilization, so that all that is needed today to enrich and promote the meaning of history is to portray the huge drama of planetary development in its full global proportions as that panorama moves on towards its ultimate objective of terrestrial synthesis.

On this note we bring to a conclusion our broad analogy between two vehicles of integration, the progressive synthesis of a planetary civilization as the goal of the developing social order and the corresponding structural elaboration of the central nervous system as the basis for the biological mobilization of energies and harmonization of responses in organisms.

But as we look forward into the future, let us always remember: both types of planning—subjective, inner and objective, outer global planning—must proceed together, side by side and step by step. Just as the cerebrum is the specific organ of intelligence within the individual organism, so culturally the world sensorium must be constructed as the instrument of social intelligence and global planning. Moreover, just as mental patterns of old-fashioned *hemispherics* are giving way to a new-age *globalistics*, so in a parallel way the cortico-thalamic integrations of the cerebral hemispheres are united to produce the subjectively rounded-out patterns of a head-heart synthesis. Finally, just as in the individual we are gifted with the

biological inheritance of an eye-brain-mind layout, so socially we now need to create an organ of social vision, a world cortex, capable of a world survey, a planetary planning, and a global execution of humanistic directives. Nothing less than this can satisfy the world-vision of planetary humanism and of global semantics.

SCIENTIFIC HUMANISM AND GLOBAL SEMANTICS

In the preceding chapters we have had much to say about semantics, scientific humanism, planetism, and global thinking. Some of these terms represent new doctrines, and not a few readers and critics have raised questions about the meanings of the terms employed, the issues raised, and the unsolved problems growing out of the use of this strange terminology. In order to summarize the argument, indicate interrelationships and clarify issues, it is appropriate in this final chapter that we deal briefly with the various types of questions most frequently asked about the present formulations. Accordingly we present here a sequence of problems, arranged in four groups, with the appropriate answers following upon the statement of these questions.

I. GENERAL

1 *What can be done about a world described by Kierkegaard as being afflicted with a sickness unto death?*

To cure its obviously serious malady, the modern world needs a new system of thought to replace outmoded political, economic, and social views which still linger on, confusing us by their very presence.

2 *What is the name of this new view and mode of*

thinking which is offered as a substitute for the traditional doctrines?

This new system of orientation is termed *scientific humanism*; its principal tool is called *global thinking*, or more briefly *globalism*. Scientific humanism sets itself the problem of reconstructing the minds of men so that they can rebuild society, create the World of Tomorrow, and live in this new civilization of the future.

3. *What is your definition of scientific humanism?*

Scientific humanism is the doctrine that men, through the use of intelligence, directing the institutions of democratic government, can create for themselves, without aid from "supernatural powers," a rational civilization in which each person enjoys security and finds cultural outlets for whatever normal human capacities and creative energies he possesses

4. *Is it a new religion, or a philosophical movement, or a new doctrine of science?*

Scientific humanism incorporates some of the features of all of these, but to cover the situation we are forced to coin a new label and term scientific humanism a political-economic-ideological synthesis.

5. *What does scientific humanism take over from science? And what is its claim to being "scientific"?*

Scientific humanism is "scientific" first because it recognizes the primacy of scientific methods, and secondly, because its major generalizations grow out of actual results of the developing sciences

Various remedies for the ills of society have been proposed, but we believe that the promise of the future lies with scientific humanism. We must relinquish neither our humanity nor scientific methods—both are necessary.

To mechanize the individual or to renounce science is to reject the best heritage of Western civilization

6. What conception of scientific method is humanism committed to?

In the present formulation, "scientific method" is not narrowly conceived. It includes "insight" or *gestalt* theory. We do not adopt the behavioristic theory that scientific method excludes subjective experience. The understanding of living phenomena by a biologist or a psychologist includes a sympathy, or "feeling with," which goes beyond the analytical technique of "understanding" life by breaking it up into its constituent units. A sense of wholeness, functioning as such, is essential to an understanding of organisms.

A creative scientist is like an artist in that he uses his imagination, drawing upon the unconscious repository of experience for his fertile suggestions, but the scientist, unlike the artist, returns to the world of facts to check his hypotheses by reference to the world of sense experience. We have faith in scientific humanism because we believe that scientific method is much broader than antimetaphysical positivism is willing to concede

7. Isn't scientific humanism just a modern name for old-fashioned materialism? If not, how does it differ from the traditional forms of materialism?

Modern "materialism" is quite different from ancient materialism. Ancient Greek atomism ("materialism") thought of matter in static, inert terms—"matter" is that which is acted upon by "force"; it has no power within itself to initiate any activity. The new physical theory of nature is based on the modern electrodynamic theory of matter, "matter" is full of energy—is indeed only a form

of energy—and is not something static, inert, changeless, a dumb and brute stuff. Matter can initiate activity from within, under proper field conditions, and it can be guided through the interaction of "inner" and "outer" forces (stresses and tensions). Hence "body" does not need a super-physical "mind" to animate and direct it. In view of this difference between ancient and modern "materialism," a new term should be employed to describe our view and on other occasions we have employed the label a *monism of action*.

8. *How about the criticism that scientific humanism is not for the common man, that it is unintelligible if not even repugnant to him?*

The fact that the "masses" cannot understand it is no criticism of scientific humanism. The masses do not understand relativity theory, or the theory of proportional representation, and so on. In the past the masses did not understand the doctrine of the Trinity, yet churches built imposing superstructures upon it. Someday, through education, laymen may come to understand relativity theory and the new quantum physics which are transforming our world, and someday through an education aimed in that direction, scientific humanism may be so interpreted as to be intelligible to the masses.

9. *Isn't your point of view too optimistic? How can man hope to control his future?*

The terms "optimism" and "pessimism" only throw dust in our eyes, we cannot see what we are trying to understand. Scientific humanism cannot overlook the fact that the work that is done in this world is done by those who believe it *can* be done. In some cases, the belief in the truth of a proposition helps to make that proposi-

tion true. This is what is meant by "pragmatic sanction."

10 *How new is scientific humanism? Who was the first person to use the term?*

The term "scientific humanism" has come into use quite recently. So far as our information goes, the first person to use the term was Henry Chester Tracy, who in 1927 published a book *Towards the Open*, with the subtitle "A Preface to Scientific Humanism." Julian Huxley wrote the introduction to this volume.

11. *Who are some advocates of scientific humanism?*

Without trying to be exhaustive we suggest the following: Lancelot Hogben, author of *Dangerous Thoughts*; Julian Huxley, author of *Man Stands Alone*; George Sarton, author of *Humanism and the History of Science*.

12. *What does the present variety of scientific humanism have in common with other varieties of naturalistic humanism? And how does it differ from them?*

All forms of naturalistic humanism presuppose a theory of emergent evolution. But in the present viewpoint, this theory is applied not only to biological but to mental evolution. Even the "laws of thought" are supposed to be a product of a biological-social evolution on the human level. In the present variety of scientific humanism, there is a greater interest in semantics than appears in the other forms. Moreover, no other variety of humanism is committed to a non-Aristotelian logic.

13 *How does scientific humanism differ from Marxism?*

The Marxists place a greater emphasis on the economic factor than does the present theory. The Marxists are much closer to the "materialistic" interpretation of history and lean more heavily on the doctrine of economic

determinism. For humanism as previously defined, the proper method of social reform is through the legislative channels of democratic government (where they exist), rather than through "direct action" or violence.

14. *What does scientific humanism have in common with Marxism?*

Scientific humanism can go along with the Marxist humanism of such men as Corliss Lamont in agreeing upon the need for a shared world, the socialization of industry, the *subordination* of the profit motive (not necessarily the *elimination* of it), and so on. The big problem is *how* we are going to bring about the desired changes.

15. *How does scientific humanism differ from Technocracy?*

In scientific humanism there is a greater interest in the problem of finding cultural outlets for our creative energies. Humanism does not turn its back on religion as superstition, as Technocracy is inclined to do.

16. *Why does scientific humanism insist upon a new theory of nature?*

In order to provide a place in nature for human experience and values, without resorting to supernaturalism. Traditional materialism (the classical physical science of Newton and Laplace) excludes purpose from nature. Under such a theory there is no adequate conception of the place and possibilities of man in nature.

17. *In placing man in a central position, does not humanism lay itself open to the charge of "anthropomorphism"?*

Copernicus dethroned man from his central place in nature, but humanism proposes to re-establish man as the

center of the drama of the cosmos. "Cosmecology"—to use Dr. Harlan T. Stetson's term—hopes to demonstrate how man has evolved so as to be adjusted to nature, but humanism points to the need for refashioning man's planetary abode so that it becomes the plastic environment for the reforming of an evolving humanity. In the universe of global thinking, man rediscovers his unity with nature through his increasingly conscious control of the circle of causal influences whereby man finally emerges as the spear-head of evolutionary advance as it spirals upward towards Planetary Democracy.

II. RELIGION AND ETHICS

1. *Is scientific humanism a religion?*

The answer to this question depends on your definition of religion. Scientific humanism does embody the motives and drives of the religious spirit, a sense of awe and reverence and an attitude of worship. The distinction we here make between a "religion" and "the religious spirit" is similar to the distinction set up by John Dewey in his little book *The Common Faith*.

2. *Why is scientific humanism opposed to the traditional authoritarian religions?*

Because authoritarian religion (one with a creed established by official church councils) is static, dogmatic, and opposed to further progress. Instead of freeing man's inner life, authoritarian religion binds man to the past. Scientific humanism's criticism of the traditional religions is that while in some cases they were founded by great ethical geniuses, the church which came into being to perpetuate the teachings of the founder confuses the

spirit of the teacher with the particular code he advocated, suitable to his own time. Thus the church transforms a vision into a socialized-institutionalized fossil.

3. If scientific humanism encourages a sense of awe and reverence, and does not despise emotion, what is the object of the worship of this proposed global civilization?

The modern scientific substitute for the Trinity of theology is the cosmos itself—the Space-Time-Matter Unity. This replaces the Father, Son, and Holy Ghost. But let us always stress the upward-striving effort of humanity, the God in man is the desire of man to be something more than what man has been in the past or is now.

4. How does this view differ from Pantheism?

Scientific humanism is not so quietistic as Spinoza's theory requires. There is no "freedom" in the deterministic scheme of Spinoza's pantheism. In scientific humanism man is a real agent in refashioning an uncompleted universe. Man can create a new dimension of an emergent social order. Global democracy or Planetism has the religious characteristic because we rediscover democracy in man's co-operative quest for a better world.

5. Does not ethics require a system of supernatural sanctions? How can we hope to have human beings obey moral principles if they are not supposed to come from God?

The good life does not need supernatural or extra-mundane motivations or sanctions. A sound ethics must rest upon a sound physics, we have admitted; and moral principles may be grounded in God, if by this is meant the universe of pantheism—but this is not supernaturalism. A miracle-inspired religion is incompatible with the presuppositions of science.

6. Do you recognize any place for spiritual geniuses in social life?

Of course we do. The spiritual (ethical) genius historically is a person who universalizes the principles of human relations in his particular society. He can transpose social *gestalten* from one situation to a broader public whole. The great leaders of the future will be those who can universalize (globalize) principles for all mankind, work out new economic-political mechanisms for a universal civilization.

III. POLITICAL-ECONOMIC REFORMS

1. What does scientific humanism regard as the first job to be done?

The most important immediate task of democracy is to win the war. But in the meantime democracy must reformulate its ideology and its program as a reply to the personality-destroying tenets of nationalistic totalitarianism and then extend this "last, best hope" of humanity to global proportions.

2. Are you trying to transform the world into a planetary super-ant hill? Would you superimpose "democracy" on the rest of the world by force?

While the normal procedure for developing democracy is by way of a relatively slow growth from the bottom up, the world we live in is moving so rapidly that we must defeat the opposition nations, and then coerce them into abandoning their feudal systems and into accepting their places, when they are ready, in a world federation of democratic states. This looks like introducing global

democracy "from the top down." But how else can the Four Freedoms and the principles of the Atlantic Charter be introduced into some areas of the globe?

3. *What specifically are these new economic-political mechanisms you mention so frequently?*

This is a problem for "experts." There are two main desiderata of a new society access to sources of raw materials and outlets for surplus commodities. These, along with correlative minor questions, must be taken care of. Economic security, or freedom from want, is something an enlightened civilization can attain, if we put our intelligence to work on the problem. What is most needed is a semantic analysis of "money."

4. *Do you have any concrete ideas about how to go about reconstructing the world after this war is over?*

This is a problem which should not be directed especially to the scientific humanist—it is a question we should all be thinking about. Social reconstruction will come painfully, and perhaps not too rapidly, unless we are in for some more revolutions. But the terms of the peace should not be written under the influence of belligerent passions. Perhaps we should have a protracted armistice period, while we work out readjustments, preserving the peace among the nations in the meantime through an international police force set up by the United Nations.

After the war is over, we should reconstruct our world in such a manner as to bring about a universal basic pattern of culture with a common system of ethics. So far as necessary international transactions are involved, we need a common economic-political pattern of life; but beyond that there is no reason why we should not have local cultural autonomy—free play for the folkways of

groups in local situations. What we call global democracy will be built upon a restored international law. The various conflicting ideologies of the world—fascism, communism, capitalism, and so on—will have to be transcended by a new economic-political-ideological synthesis.

5. Why do you make humanism so aggressive on these points?

The cost of this global war is stupendous. The only way to justify this cost in life and money and social chaos is to make it the price we must pay for a new earth and a new humanity. We can fight this war with vigor only on the assumption that after the war (or even during its prosecution) we will create a better civilization to take the place of the one we are destroying.

IV SEMANTICS AND GLOBAL THINKING

1. What is semantics, and why is scientific humanism so much interested in semantics?

Semantics is the theory of meaning, the study of map-territory relationships, the study of the relation of ideas, words, and symbols to the outer world of nature. In brief, semantics is the theory of "sense" and "nonsense." Since language is the essential instrument of man's humanity (as one semanticist puts it), the study of the relation of language (verbal maps) to the non-verbal world (territory) is fundamental to scientific progress and social reform.

2. Why does scientific humanism stress so much the need for throwing off old habits of thought and acquiring new ways of thinking?

Scientific humanism holds that today's international struggles and conflicts are a manifestation of a cultural crisis—an outward symptom of an inner confusion. This points to the need for a new world-wide "thinking" and "feeling" (semantic reactions), and this can only be developed through a broader type of scientific theory.

3. *What is this broader type of scientific theory?*

This new scientific theory is "a theory of human relativity," a science of human life modelled after Einstein's theory of physical relativity. According to this theory, the difficulties of civilization at present are due to the fact that in social situations people are still using the thinking of Aristotle, Euclid, and Newton, when they should be orienting themselves according to later and higher patterns of adjustment.

The old Newtonian ideas were such that the world was divided into absolute, separate (elementalistic) things, like *space, time, force, matter, energy, consciousness*, and the like. The new relativistic ideas show that space and time are not absolutely separate, matter and energy are not realities of a different category but different aspects of a unified reality.

In dealing with the theory of relativity, it must be remembered that a common misconception exists, and to correct this misinterpretation it must be pointed out that the theory does not mean that *everything* is relative. The physical theory of relativity is precisely a device for stating the laws of nature in such a manner that they are independent of particular frames of reference. In the same way the theory of human relativity which we here propose does not make all human values relative it is trying

to find a symbolism and a set of principles independent of the elementalistic frames of reference of "language," "race," "religion," "nation," and other geopolitical artifacts. Global semantics and planetary humanism are seeking relations which, like "public time," are transposable across the parts of the social whole, which is Humanity.

4. And where does "global thinking" come in?

Relativistic thinking has translated a flat world of Euclid into a round world of Einstein. Newton knew that the world is round; Einstein argues that the whole universe is round (curvilinear). Now just as planal thinking in physics has given way to global thinking, so in general man's whole outlook must be "rounded out." "Straight thinking" must be done globally. Thus global thinking is brought into inner connection with the space-time curvature of modern, non-Euclidian geometry, where the straight line of Euclid and Newton is interpreted as a circle returning upon itself. When the implications of this are worked out, it develops that seemingly different and opposite things appear as various aspects of developing, globe-like views.

5. What scientists were most responsible for the traditional or classical system of science?

Aristotle, Euclid, Newton, and Darwin set the compass of human thought and marked out the boundaries of its explorations. But now we see that the classical picture of man and nature was inadequate. Already in physics, Einstein's theory of relativity and the doctrine of wave mechanics have ear-marked the revolution in our theory of physical nature. Now we discover that the clearing up of the confusions which have resided within

the fundamental concepts of physical science is but a prelude to the clearing up of the confusions about the social and moral purposes and values of modern life. Science is calling for and helping to create a new mentality—the non-Aristotelian mentality.

6. And how does psychology come into the picture?

In the past the psychologists have paid lip service to evolution, but they never seem to have realized that evolution is not yet done with the human organism. The new, non-Aristotelian logic which scientific humanism adopts, not only achieves a resolution of the confusions in physics but culminates in a new theory of biological and human mental evolution. This is made possible by the discernment of an underlying continuum of nature in which individuality becomes relative to the wholeness of which it is a part. Thus, we are led to think of humanity not in static terms as a finished product, but as an inflection point in a curve of evolutionary progress. Thus, too, in the light of the viewpoint of scientific humanism, man must consider himself as a part of a single, cosmic being. The entire human race is a sort of brain-nerve-system for nature, and the non-living world becomes subtly united with man himself, so that radio and television appear as precursors of the circulatory process of an evolving social organism moving on towards a new biological integration.

This, in brief form, is the analysis of scientific humanism. If it is correct in its diagnosis that the troubles of the modern world are at bottom the result of the failure of human thinking, then we must stress the need for mental reorientation as a necessary prelude to the large-scale political and economic readjustments which must come if

our civilization is to escape complete disaster in some future repetition of present catastrophic conflicts. In the process of undertaking the much needed task of laying the foundations for a coming world civilization, we must see to it that at the same time we reconstruct the old, established ways of thinking which precipitated this world conflict in the first place.

7. This all sounds very impressive, but I still feel that I do not fully comprehend what you mean by "global thinking." Can you explain further?

The general principle of global thinking is simply this: to understand any event or phenomenon one must understand the total environment (ultimately the entire cosmic context) with which that event occurs. In the sphere of human situations, this means that social relations, like spatio-temporal relations, involve curvature. No human act is isolated, it moves back upon itself.

Mathematics has already provided physics with the necessary tools to deal with the curvature of the space-time continuum, and now mathematics must provide a technique by means of which we may proceed with global thinking on the level of human planetary evolution. Our analogy between geometry and ethics (in terms of "social curvature" or social karma) not only encourages the hope that ethical norms can be established and guaranteed by scientific procedure, but it also calls attention to the fact that not only science, but in addition religion, politics, and economics, must be socialized, humanized, and universalized—globalized, in short. Just as the physical scientist interprets events in terms of field structure curving the space-time continuum, so in our new topology of humanity the social scientist interprets events in

terms of a psycho-social continuum both require their *curves of action*, their *probability waves*, their *potential barriers*, their *tunnel effects*, and the like.

8. *Can you supply us with a few more examples of global thinking in the various fields?*

Since scientific humanism proceeds on the assumption that philosophy, social science, and religion must recognize a physical basis for the unity of mankind, most of our illustrations of global thinking have been drawn from physical science, in order precisely to establish that physical foundation. Now we all use a little planetism and global thinking each day of our lives. When we recognize the relativistic principle that our individuality reflects our interrelationships with the whole of nature and human history, we confirm on a common level the poetic insight of Tennyson when he said, "I am a part of all that I have met," and this, after all, is only restating on a higher level the physicist's recognition of the importance of "frames of reference."

Of course, for planetism the global frame of reference for man is the earth itself. As this earth of ours moves on to its new destiny, man discovers more and more how his fate is linked to that of the planet which is his nursery, his home, and up to now his grave. Thus are we coming to look upon the earth and our relations to it in terms of organic co-ordinations—what it does to us and what we in turn are doing to it.

9. *Why do you insist upon these developments as something new; after all, didn't the ancient Greeks have some such notions? Didn't they always "have a word for it"?*

That scientific humanism contains genuine elements of

novelty is indicated in one way by pointing to the fact that the Greek system of logic, on which the whole of European thought has rested since the days of Aristotle—almost twenty-five hundred years—was incapable of creating the thing we call imaginary number. As we have seen, it needed the Western mind in revolt to embrace the square root of minus one. But this imaginary number was the seed which produced, in due time, the theory of electromagnetism. New ideas in mathematics and correlative experiments in physics created the civilization of today. Every motor car, every airplane, every tank, every machine that depends on the principles of electromagnetic induction also depends on imaginary numbers. When electricity comes in, the tyranny of classical physics goes out.

This illustration of the influence of a new set of ideas suggests another example of non-Aristotelian thinking: that of the modern electrodynamic theory of matter, where the relativity of "substance" is clearly established. This rejection of the absoluteness of substance in physics in favor of the notion of relativity and the emergent evolution of behavior-stuff ("things") is in keeping with our organismic logic of global thinking. Thus the non-Aristotelian approach avoids the fallacy of the old "law of identity," since we now see more clearly the manner in which "individuality" becomes relative to the wholeness of which it is a part. Dr. A. N. Whitehead's thesis that an electron within an organism behaves differently from an electron outside the body, because the plan of the whole modified its parts, is now set up as a universal principle for all cases where we are dealing with organismic (global) situations.

V. SCIENTIFIC HUMANISM AND CHRISTIAN HUMANISM

1. *How does Christianity fit into the global picture of scientific humanism?*

This question has been touched upon in Chapter X. Briefly, what we have there tried to show is that the thing of most value in Christianity—namely, love as the principle of human unification through “responsibility accepted”—is still a potent force for bringing people together. Charles Hartshorne has defined mutuality as “the supreme moment when another’s self is discovered to us, opened to us, in that joint recognition of sympathy, affection, and profound respect which the Christians call love.” This excellent statement seems to epitomize the ethics of Jesus.

2. *Will you state again your conception of how scientific humanism and Christianity are to be harmonized in the coming planetary civilization?*

Victor Hugo once stated that there is one thing stronger than all the armies in the world, and that is *an idea whose time has come*. For two thousand years the fundamental ideas of Christianity have not taken hold, perhaps because their “time has not yet come.” Now we face the critical choice of putting the ethics of Jesus into practice or of being destroyed by the science without the support of which Christianity itself is incapable of surviving.

The modern idea that the world is one, that by the relationships imposed by the very nature of the universe we are responsible for the welfare of our fellow men wherever they may be, is not a completely novel idea.

Many millions of Christians have been saying just that very thing over and over at their rituals and services for two thousand years, when they say that "we are members one of another." We have sent missionaries all over the "heathen" world to repeat this. But we have not believed it.

What scientific humanism is offering as the new element is the conviction growing out of research of a oneness of human life and the physical world in which that life has its being, that behind the physical reality of the visible world is the unseen world of formative field influences, the intangible supporting framework for the tangible world of earthly existence. This cosmic context for the human adventure sets the stage for the next act of the drama, wherein science and religion now make their final peace—or else destroy the humanity of man which they both profess to serve.

To those who view the kaleidoscope of human history in broad perspective it appears that man's scientific progress is commensurate with his means and media of locomotion. We see, in retrospect, that man has successively conquered solids, liquids, and gases from the land, sea, and air man moves to more subtle media. As he thus triumphs over space and time, man is uniting his planet into a technological unity which cries out for a parallel political-intellectual unification. The radio, airplane, and television are giving us mastery over distance and time, and the further conquests of our air-age global technologies must either result in a new despotism or the air- and ether-age civilization will be used by free peoples everywhere to build their own planetary civilization.

As creatures of the earth who have learned to live in

the sky, we must become increasingly sensitive to the human overtones the world round. Let us help to contribute to the emerging melody of all the peoples of the earth, who can now be satisfied only to the extent that they share in the solution of their common problems, global in scope and perplexity, but easy of solution when the will-to-good is integrated with social intelligence to create a social structure expressing the planetary wisdom of the human race. Our human problems on the lower levels will be resolved when subjective love (the will-to-good) is integrated with objectified social intelligence to create the planetary civilization of world humanism.

APPENDICES

I

THE FOUR FREEDOMS

In the future, which we seek to make secure, we look forward to a world founded upon four essential human freedoms

The first is freedom of speech and expression—everywhere in the world.

The second is freedom of every person to worship God in his own way—everywhere in the world.

The third is freedom from want, which translated into world terms, means economic understanding which will secure to every nation a healthy peace-time life for its inhabitants—everywhere in the world

The fourth is freedom from fear, which translated into world terms, means a world-wide reduction of armaments to such a point and in such a thorough fashion that no nation will be in a position to commit an act of physical aggression against any neighbor—anywhere in the world

President Roosevelt in a speech broadcast January 6, 1941.

THE ATLANTIC CHARTER

The President of the United States and the Prime Minister, Mr. Churchill, representing His Majesty's Government in the United Kingdom, being met together, deem it right to make known certain common principles in the national policies of their respective countries on which they base their hopes for a better future for the world.

1. Their countries seek no aggrandizement, territorial or other
2. They desire to see no territorial changes that do not accord with the freely expressed wishes of the peoples concerned.
3. They respect the right of all peoples to choose the form of government under which they will live, and they wish to see sovereign rights and self-government restored to those who have been forcibly deprived of them.
4. They will endeavor, with due respect for their existing obligations, to further the enjoyment of all States, great or small, victor or vanquished, of access, on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity.
5. They desire to bring about the fullest collaboration between all nations in the economic field with the object of securing, for all, improved labor standards, economic advancement, and social security.
6. After the final destruction of the Nazi tyranny, they hope to see established a peace which will afford to all nations the means of dwelling in safety within their own boundaries, and which will afford assurance that all the men in all the lands may live out their lives in freedom from fear and want.

7. Such a peace should enable all men to traverse the high seas and oceans without hindrance

8 They believe that all of the nations of the world, for realistic as well as spiritual reasons, must come to the abandonment of force. Since no future peace can be maintained if land, sea, or air armaments continue to be employed by nations which threaten, or may threaten, aggression outside of their frontiers, they believe, pending the establishment of a wider and permanent system of general security, that the disarmament of such nations is essential. They will likewise aid and encourage all other practicable measures which will lighten for peace-loving persons the crushing burden of armaments.

*Franklin D. Roosevelt
Winston S. Churchill*

August 14, 1941

CHINESE PRINCIPLES

Of the Republic, Sun Yat-sen is both the ideological father and the real founder. . . . The ideal system of government, Sun thinks, is divided into five independent departments—legislative, executive, judicial, examination, and censorial—which can check and balance one another . . . The examination department is to select civil servants, the censorial department to supervise the conduct of officials and the working of political machinery .

The Chinese Republic is founded upon the Three Principles of the People (*San Min Chu I*)—the principle of national independence, the principle of political democracy, and the principle of social welfare. The three principles, says Sun, aim at establishing “a government of the people, by the people, and for the people”

China must maintain complete territorial and administrative integrity and must be free from foreign domination . . . she must co-operate with all those nations that treat her on the basis of equality Sun puts equal emphasis upon national independence and international co-operation. He wishes to see a China completely free and independent, at the same time he expresses the hope that all free nations will be organized into a great universal commonwealth . . . Sun declares that democracy is the goal of political evolution When the masses are unenlightened, autocracy or aristocracy may be of considerable value. As civilization advances, people grow in intelligence and in reasoning power and develop a new consciousness of self-dependence and self-control Democracy is the end-product in the process of civilization

Sun makes a significant contribution to the theory of democracy in his emphasis upon the distinction between

sovereignty and ability. Sovereignty, that is, control of public policy, should be vested in all citizens, while public administration should be undertaken by men of ability "The government of a republic," says he, "must be built upon the rights of the people, but the administration of public affairs must be entrusted to experts."¹

* * * *

It was in Brussels that he (Sun Yat-sen) first outlined the basis of present and future Chinese Democracy, the *San Min Chu I*. This trinity of aims he called *min-tsu*, "the people to have", *min-chuan*, "the people to rule"; *min-sheng*, "the people to enjoy". But when his audiences pressed for clarification, he defined them simply as nationalism, democracy, and livelihood . . .

Sun Yat-sen, however, meant more than the right to cast a ballot when he proposed that China must have government by the people. He meant also the whole development of political virtue along Confucian lines. That is, he insisted that citizens must be capable of governing themselves, for no nation is ultimately worthy of democracy until each individual sincerely places the good of the whole ahead of his own personal or sectional desires. One quality never possessed by traditional China is what is popularly called "a social conscience." To expand family loyalty into large-scale unity and co-operation is a task for democracy as well as for nationalism. . .

It is worth noting that this principle of livelihood, *min-sheng*, is literally translated, "the people to enjoy." We of the West are only slowly coming to realize that democracy is neither genuine nor complete when the amenities of life are neglected. No nation is truly democratic as long as one-third of its people are ill-fed, ill-clothed, and ill-housed, or even 5 per cent are unemployed. It is for this reason that Sun Yat-sen nearly forty years ago placed freedom from

¹ From the epilogue in *Men and Ideas*, an informal history of Chinese political thought, by Lin Mousheng (The John Day Company, 1942.)

want among his essential principles of democracy. It has been remarked that the American Revolution was for national independence, the French Revolution for political equality, and the Russian Revolution for economic justice. As they in turn represented nationalism, democracy, and livelihood, it is not inaccurate to suggest that the Chinese Revolution has made the overwhelming attempt to combine all three of these objectives in one.

He (Sun Yat-sen) would acknowledge that his country has a long and difficult task remaining before her in war and in peace. "We must realize that political democracy is not given to us by nature, it is created by human effort."²

* * * *

Side by side with the *San Min Chu I* there evolved the New Life Movement. In a booklet published by the Association for the Promotion of the New Life Movement, written by General Chiang himself and translated into English by his wife, the following definitions of the four concepts of the movement are given as follows.

L means a regulated attitude (mind as well as heart).

I means right conduct (in all things).

Lien means clear discrimination (honesty in personal, public, and official life).

Ch'ih means real self-consciousness (integrity and honor).

* * * *

Tsu Chi, in *A Short History of Chinese Civilization* says

"The four cornerstones of the (New Life) movement, upon which the people were invited to build their lives, were the moral virtues of right behavior (etiquette), justice, integrity, and honor mentioned in the work of a Sage even older than Confucius. But these virtues were to be applied in every day affairs 'such as food, clothing, shelter, and action' . . . discipline and promptness in public service, frugality, orderliness, and good taste in the home—these were the aims of the movement by which China was to grow strong."

² From Chapter Four, "Three Principles of the People," in *Is China a Democracy?* by Creighton Lacy (The John Day Company, 1943.)

COSMIC RELIGION

Everything that men do or think concerns the satisfaction of the need they feel or the escape from pain. This must be kept in mind when we seek to understand spiritual or intellectual movements and the way in which they develop. For feeling and longing are the motive forces of all human striving and productivity—however nobly these latter may display themselves to us.

What, then, are the feelings and the needs which have brought mankind to religious thought and to faith in the widest sense? A moment's consideration shows that the most varied emotions stand at the cradle of religious thought and experience.

In primitive peoples it is, first of all, fear that awakens religious ideas—fear of hunger, of wild animals, of illness, and of death. Since the understanding of causal connections is usually limited on this level of existence, the human soul forges a being, more or less like itself, on whose will and activities depend the experiences which it fears. One hopes to win the favor of this being by deeds and sacrifices, which, according to the tradition of the race, are supposed to appease the being or to make him well disposed to man. I call this the religion of fear.

This religion is considerably stabilized—though not caused—by the formation of a priestly caste which claims to mediate between the people and the being they fear, and so attains a position of power. Often a leader or despot, or a privileged class whose power is maintained in other ways, will combine the function of the priesthood with its own temporal rule for the sake of great security, or an alliance

may exist between the interests of the political power and the priestly caste.

A second source of religious development is found in the social feelings Fathers and mothers, as well as leaders of great human communities, are fallible and mortal The longing for guidance, for love and succor, provides the stimulus for the growth of a social or moral conception of God This is the God of Providence, who protects, decides, rewards, and punishes This is the God who, according to man's widening horizon, loves and provides for the life of the race, or of mankind, or who even loves life itself. He is the comforter in unhappiness and in unsatisfied longing, the protector of the souls of the dead This is the social or moral idea of God

It is easy to follow in the sacred writings of the Jewish people the development of the religion of fear into the moral religion, which is carried further in the New Testament The religions of all the civilized peoples, especially those of the Orient, are principally moral religions An important advance in the life of the people is the transformation of the religion of fear into the moral religion. But one must avoid the prejudice that regards the religions of primitive peoples as pure fear religions and those of the civilized races as pure moral religions. All are mixed forms, though the moral element predominates in the higher levels of social life Common to all these types is the anthropomorphic character of the idea of God

Only exceptionally gifted individuals or especially noble communities rise *essentially* above this level of religious experience, even if it is seldom found in a pure form. I call this the cosmic religious sense. This is hard to make clear to those who do not experience it, since it does not involve an anthropomorphic idea of God, the individual feels the vanity of human desires and aims, and the nobility and marvellous order which are revealed in nature and in the world of thought He feels the individual destiny as an imprisonment and seeks to experience the totality of

existence as a unity of full significance. Indications of this cosmic religious sense can be found on earlier levels of development—for example, in the Psalms of David and in the Prophets. The cosmic element is much stronger in Buddhism, as, in particular, Schopenhauer's magnificent essays have shown us.

The religious geniuses of all times have been distinguished by this cosmic religious sense, which recognizes neither dogmas nor God made in man's image. Consequently there cannot be a church whose chief doctrines are based on the cosmic religious experience. It comes about, therefore, that precisely among the heretics of all ages we find men who are inspired by this highest religious experience, often they appeared to their contemporaries as atheists, but sometimes also as saints. Viewed from this angle, men like Democritus, Francis of Assisi, and Spinoza are near to one another.

How can this cosmic religious experience be communicated from man to man, if it cannot lead to a definite conception of God or to a theology? It seems to me that the most important function of art and of science is to arouse and keep alive this feeling in those who are receptive.

Thus we reach an interpretation of the relation of science to religion which is very different from the customary view. From the study of history, one is inclined to regard religion and science as irreconcilable antagonists, and this for a reason that is very easily seen. For anyone who is pervaded with the sense of causal laws in all that happens, who accepts in real earnest the assumption of causality, the idea of a Being who interferes with the sequence of events in the world is absolutely impossible. Neither the religion of fear nor the social-moral religion can have any hold on him. A God who rewards or punishes is for him unthinkable, because man acts in accordance with an inner and an outer necessity, and would, in the eyes of God, be as little responsible as an inanimate object for the movements which it makes.

Science, in consequence, has been accused of undermining morals—but wrongly. The ethical behavior of man is better based on sympathy, education, and social relationships and requires no support from religion. Man's plight would, indeed, be sad if he had to be kept in order through fear of punishment and hope of rewards after death.

It is, therefore, quite natural, that the churches have always fought against science and have persecuted its supporters. But, on the other hand, I assert that the cosmic religious experience is the strongest and the noblest driving force behind scientific research. No one who does not appreciate the terrific exertions and, above all, the devotion without which pioneer creations in scientific thought cannot come into being can judge the strength of the feeling out of which alone such work, turned away as it is from the immediate practical life, can grow. What a deep faith in the rationality of the structure of the world and what a longing to understand even a small glimpse of the reason revealed in the world there must have been in Kepler and Newton to enable them to unravel the mechanism of the heavens, in long years of lonely work!

Anyone who only knows scientific research in its practical applications may easily come to a wrong interpretation of the state of mind of the men who, surrounded by skeptical contemporaries, have shown the way to kindred spirits scattered over all countries in all centuries. Only those who have dedicated their lives to similar ends can have a living conception of the inspiration which gave these men the power to remain loyal to their purpose in spite of countless failures. It is the cosmic religious sense which grants this power. A contemporary has rightly said that the only deeply religious people of our largely materialistic age are the earnest men of research.

A statement by Albert Einstein, published by the New York Times Magazine and by Covici-Friede, 1931.

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